RESEARCH REPORT

INTERNATIONAL EXPERIENCES WITH PERFORMANCE-BASED PLANNING

HOUSING AFFORDABILITY AND FINANCE SERIES

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International Experiences with Performance-Based Planning

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EXECUTIVE SUMMARY

Why This Study Is Important

This study documents the international use of alternative approaches to planning and development regulation, specifically the use of performance-based planning. Experiences in the use of this alternative approach elsewhere may offer valuable insights and lessons into how it could be used here in Canada to improve flexibility and innovation in the development of housing.

The need for this study is driven by significant changes in the demographic, social, and economic elements of Canadian society. Shifts in consumer preference and affordability demand a development environment in which flexibility and innovation are embraced. Conventional planning and development regulation in Canada seems to lead to a development environment that is inflexible and may inhibit effective response to market demands. Attempts to reflect the new market reality in Canada have been haphazard. In addition, recent Canadian and American studies have found that conventional regulatory systems increase development costs and often stifle technical and design innovation. Alternative approaches to planning and development regulation are being used in other countries. These alternatives include "performance-based" planning systems that promote flexibility and innovation in development.

How This Study was Completed

This study focuses on the experiences of other jurisdictions in the use of performance-based planning. The primary source of data was 26 informant interviews. At the municipal level, one regulator and one developer (including consultants) were interviewed. Where state or federal governments played a significant role, informants in the appropriate agencies were interviewed. Academic experts in performance-based planning in each country were also contacted. Thematic content analysis of each informant interview was completed, the interpretation of which focused on whether the performance-based planning approaches used in other jurisdictions could survive a shift to the Canadian context. This made it possible to speculate on whether this approach would work in Canada, and what adaptations and contexts would be required.

Conventional Zoning vs. Performance-Based Planning

In 1916, the first zoning ordinance was adopted in New York City. The thinking behind zoning was that dissimilar uses are incompatible and local governments established districts of varying permitted and

prohibited uses. While conventional zoning may work well in a majority of development scenarios, the scale of land development is now much larger, more complex, and must address wider public objectives and more sophisticated stakeholders. And although conventional zoning continues to enjoy wide popular support, many alternatives have been introduced to offer more flexibility in meeting regulatory requirements. Performance-based planning is one such alternative.

While conventional zoning attempts to regulate development by controlling the use of land, performance-based planning does so by regulating the actual physical characteristics and functions (performance) of a use measured against predetermined standards. These standards are quantitative measures of development impact to be administered without discretion. Since regulatory districts and regulations are based on performance instead of land use, it is possible that any land use could locate adjacent any other land use, provided it satisfies the standards. Early performance standards were relatively simple and included criteria for noise, glare, odour, vibration, etc. The standards of today are generally more complex, since the performance expectations for new development are much higher, and may include traffic and stormwater generation, habitat loss, architectural detail, and more.

Why Performance-Based Planning Is Used Elsewhere

A variety of contexts result in the implementation of performance-based planning in other jurisdictions. In some cases, it is the result of senior government policy and in others it is strictly a local initiative. The issues to be addressed by performance-based planning differ as well, from growth management to design, from environmental protection to streamlining development. Regardless, it is important to understand these contexts and what it means for the successful introduction, adoption, and implementation of this approach here in Canada. In Australia, a property boom coincided with very high levels of immigration in the late 1980s caused skyrocketing housing prices in metropolitan areas. In response, a special conference on housing convened by the federal government resulted in urban consolidation becoming the main thrust of planning policy in Australia. Urban consolidation is about moving people back into urban areas through higher density residential development. It was seen as key to addressing housing affordability and promoting the use of existing infrastructure capacity. To implement this new policy, the federal government proposed a national framework of performance-based planning principles and procedures for high quality residential development. Dubbed the Australian Model Code for Residential Development, or AMCORD, the framework provides the federal government with the means to work closely with the state/territory and local governments, professional associations, and the development

industry to address urban issues of national concern. Every state/territory government in Australia has now adopted its own model code based on AMCORD.

In New Zealand, a newly elected Labour government set about making radical and sweeping reforms to government and the economy in 1984. During its second term in office, the government passed the Resource Management Act (RMA), intended to make sustainable management a clear duty of government. Local and regional governments are responsible for administration of the RMA, but since the legislation is not prescriptive, these agencies are free to interpret and implement the Act through their own plans as they see fit. While smaller councils continue to use the traditional town and country planning approach, larger ones have adopted a performance-based approach of addressing the environmental impacts of development.

In the United States, the adoption of performance-based planning approach is strictly a local initiative, not one resulting from senior government policy. Bucks County, Pennsylvania, pioneered the approach in 1973 when it adopted a model zoning ordinance with a performance component to protect natural resources and provide flexibility in residential design. Increased concern about protection of the environment from development and pressure to satisfy a state-mandated zoning requirement to provide for all legitimate land uses resulted in the drafting of the performance-based code. Performance zoning was recognized as a means of not only protecting natural resources, but also permitting a full range of housing types. In Fort Collins, Colorado, a review of the regulatory system found it inconsistent with a new land use policies plan focused on growth management. The city wanted a system that was responsive to market forces on one hand, and on the other offered some quality control over what was going to happen on a site. The result was the Land Development Guidance System (LDGS), which provides performance criteria for planned unit developments as an alternative to conventional zoning. Finally, in Largo, Florida, a review of the city's dozens of unclear and sometimes conflicting development ordinances, rapid development in the area, and a pro-growth climate resulted in the adoption of a performance-based code. The code includes more uses in each use category, the measurement of density by units per acre rather than by housing type, and the control of site use through impervious surface and floor/area ratios rather than setbacks, height limits, and minimum lot dimensions.

Lessons for Canada

The experiences of other jurisdictions can inform discussion on the possible application of performance-based planning here in Canada. The study presents 12 key lessons: 1) The Australians seem to have it right: a top-down voluntary approach that focuses on a key land use, is sensitive to inter-governmental relationships, and is responsive to the needs of both the industry and the community, is a recipe for success. 2) In Canada, any local move toward a performance-based approach would involve senior government due to

provincial planning legislation. While different levels of government have different goals, these goals should be compatible. 3) Since change can be costly and create resistance, it is important to minimize these costs by focusing on the essentials and by providing a choice between a conventional or alternative approach. It is important to ask: is performance-based planning necessary? 4) Where performance-based planning is seen as a panacea that includes all land uses and pursues a multitude of agendas, the approach can become arbitrary and too complex. The key here: don't let the means drive the end. 5) A significant event can be a catalyst for change, and while it important to recognize the psychology of change, change for change sake must be avoided. 6) Since planning is a government function, government must promote a performance-based approach. 7) Is the compromise between flexibility and predictability a red herring? The study found that while conventional zoning is predictable in routine cases, the same can be said of the performance approach in non-routine and innovative cases. 8) Complexity is the real enemy. The key is to limit the scope to a few clearly articulated goals, focus on a few key land uses, and let developers choose the approach they prefer. 9) While complexity is the real enemy, consistency is the real goal: developers simply want a consistent planning process that treats them equally and allows them to compete fairly no matter where they go. 10) Common ground is the key to success: this suggests that the best-case scenario for implementation is by a pro-growth government during a period of high growth. 11) People can work together, regardless of diversity and even antagonism. 12) If given a choice between performance-based planning and conventional zoning, developers will choose the method that most appropriately meets their needs.

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1. INTRODUCTION

The Importance of This Study

This study documents the international use of alternative approaches to planning and development regulation, specifically the use of performance-based planning. Experiences in the use of this alternative approach elsewhere may offer valuable insights and lessons into how it could be used in Canada to improve flexibility and innovation in the development of housing.

The need for this study is driven by significant changes in the demographic, social and economic elements of Canadian society. These changes affect the demand for housing in Canada, as well as our understanding of it. Shifts in consumer preference and affordability demand a development environment in which flexibility and innovation are embraced—an environment that allows the housing industry to react swiftly and effectively to shifts in the market. Conventional planning and development regulation in Canada seem to lead to an environment that is inflexible and may inhibit effective response to market demands. Attempts to reflect the new market reality in Canada have been haphazard.

In addition, recent Canadian and American studies have found that conventional regulatory systems increase development costs and often stifle technical and design innovation. These regulatory systems rely on the predetermined and prescriptive standards of zoning by-laws and other development control measures. The result: innovative projects often involve lengthy and costly approvals for the developer with no assurance of the eventual acceptance of new ideas.

Alternative approaches to planning and development regulation are being used in other countries with the intention of addressing these drawbacks. These alternatives include "performance-based" planning systems that promote flexibility and innovation in housing development.

How Was This Study Completed?

An initial list of possible jurisdictions using performance-based planning was produced based on background research. This list was modified through contact with professional, academic and government organizations worldwide and then finalized to reflect jurisdictions in developed countries sharing a similar living standard and economic system with Canada.

It became apparent early on that the application of performance-based planning occurs mostly in sophisticated, urban municipalities. Seven leading municipalities in Australia, New Zealand and the United States that use performance-based planning were studied.

Australia
- Melbourne, Victoria
- Armidale, New South Wales

New Zealand
- Christchurch
- Waitakere City

United States
- Bucks County, Pennsylvania
- Fort Collins, Colorado
- Largo, Florida

No application of this approach in Europe was found.

Since this study focusses on the experiences of other jurisdictions in the use of performance-based planning, the primary source of data was informant interviews. Twenty-six of these interviews were conducted. The "Elite Interview" method was used to provide a structured yet non-obtrusive interview approach.

Informants from Australia, New Zealand, the United States and Europe participated. At the local level, one municipal regulator and one developer (including consultants) were

interviewed. Where state or federal governments played a significant role, informants in the appropriate agencies were interviewed. Academic experts in performance-based planning in each country were also contacted.

Each informant interview was transcribed and thematic content analysis completed to permit rigorous examination of the qualitative data. Thematic analysis was made possible by coding the causes and effects of performance-based planning implementation in each jurisdiction according to the informant. This coding was based on a cause-effect matrix developed using a series of standard or expected causes and effects identified through background research on the performance-based planning approach. Frequency counts were used to determine the relevance and significance of each cause and effect.

The interpretation of these data focussed on whether the performance-based planning approaches used in other jurisdictions could survive a shift to the Canadian context. This made it possible to speculate on what may work in Canada, what adaptation is required, and what contextual changes will be necessary to make performance-based planning work here.

Chapter 2 provides a brief background of zoning and its alternatives.

2. BACKGROUND

Zoning has endured the criticism of practitioners and academics alike since the first comprehensive ordinance was passed more than 80 years ago in New York City. Zoning is blamed for the arbitrary separation of land uses, the destruction of environmental and architectural resources, the complicated, inflexible and costly development process, and failure to reflect public policy and plans (Porter et al., 1988: 3). Despite this, zoning "enjoys wide popular support, largely because it has always been an effective means of discouraging change...." (Porter et al., 1988: 3).

Early land use control through zoning regulated many aspects of land development, such as use, building height, yards and fencing requirements. And, although discretionary judgments were never intended to be part of this process, it hasn't worked out this way (Meshenberg, 1976: 2). The scale of land development has changed: it is now much larger and more complex. The result is a development process that must address wider public objectives and more sophisticated stakeholders. Over time, many elements of conventional zoning have been tinkered with as "an array of uncoordinated devices are tacked on in the hope of allowing greater flexibility for developers" (Meshenberg, 1976: 2). The result is an expansion of discretionary authority for local government and a regulatory system with strained credibility.

While many alternatives to, and variations of, conventional zoning have been introduced to offer more flexibility in meeting regulatory requirements, the acceptance and adoption of these alternatives by planners, politicians and the public is by no means widespread.

What Do We Have Now?

In 1916, the first zoning ordinance was adopted in New York City. It was intended to protect the Fifth Avenue carriage trade from being overrun by the exploding garment industry (Porter et al., 1988: 5). The thinking behind zoning was that dissimilar uses are incompatible. Zoning gave local government the power to establish districts of varying permitted and prohibited uses. Soon after, each use was further refined by its activities, its relationships with other uses and the restrictions necessary to avoid potentially adverse effects. Then in 1922, the U.S. Department of Commerce published the *Standard State Zoning Enabling Act*. This model code specified zones where uniform regulation for land use and the location, height, bulk and area of buildings should apply (Porter et al., 1988: 5). The code was quickly adapted by local governments across the country.

While conventional zoning may work well in most development scenarios, it can be restrictive and can stifle innovation. Porter et al., in their study of flexible zoning techniques, note four key flaws with traditional zoning. While some of these flaws are inherent in the assumptions of conventional zoning, others have become apparent as planning and development have evolved in the last 80 years.

- *Zoning is static*. Conventional zoning presents a predetermined land use pattern that fails to address the dynamic nature of development. As a result, zoning is often at odds with actual development needs and market demands, and amendments are necessary to permit development.

- *Zoning is parochial*. Zoning often serves local rather than regional interests since the reasons for allowing or prohibiting certain land uses are often unstated. As a result, public officials often make arbitrary decisions, and zoning becomes a means of achieving special interests.

- *Zoning cannot ensure high-quality development*. At the site level, zoning usually controls only the building envelope and is often unable to address design matters. As

a result, design concerns are often left to be negotiated during the amendment process—a process that can be unpredictable.

- *Zoning involves administrative problems.* While zoning designates districts of permitted and prohibited uses, simple, non-discretionary decisions on proposals are not necessarily the result. The result is exceptions, variances and rezonings, all of which require further administrative processing and higher costs for the developer (Porter et al., 1988: 8).

What Else Is Out There?

Several alternatives to conventional zoning have been developed, variations of which have been applied in one way or another in Canada. The sole purpose of these alternatives is to introduce flexibility to the otherwise prescriptive regulation of land use. However, increased flexibility for the developer usually comes at a price: increased discretion for the municipality in reaching a decision. These alternatives include planned unit development, overlay zones, special districts and incentive zoning.

Still other alternatives offer flexibility but in an environment of more formalized decision-making procedures. These alternatives include performance zoning or impact zoning, and point systems. Flexibility in use and density is usually the result, but unlike overlay zones or special districts, these alternatives apply to all applications in all areas. International experiences with these performance-based approaches are the focus of this study.

Performance-Based Planning as an Alternative

Conventional zoning attempts to regulate development by controlling the use of land. With performance-based planning, this determination is not based on land use, but on the actual physical characteristics and functions (performance) of a use measured against predetermined standards (Porter et al., 1988: 11). These standards are quantitative measures of development impact to be administered without discretion. Since regulatory districts and regulations are based on performance instead of land use, it is possible that any land use could locate adjacent to any other land use, provided it satisfies the standards.

While early performance standards were relatively simple and included criteria for noise, glare, odour, vibration, etc., the standards of today are generally more complex since the performance expectations for new development are much higher. Today's standards may include traffic and stormwater generation, habitat loss, architectural detail and more. It is worth noting that while there are no limits to potential land uses under a performance-based approach, site planning, building design, facility operation and other factors are often more strictly controlled.

The use of performance-based standards was first proposed in the early 1950s by the National Industrial Zoning Committee in the United States when the emergence of new technologies, materials and building techniques made the standardization of industrial land use regulation difficult (Porter et al., 1988: 11). These new standards drew on the language of building codes. When a move toward more flexible approaches to zoning began in the 1970s, the use of performance-based standards became more popular, mostly as a means of addressing the environmental impacts of development.

The benchmark for performance-based ordinances was established in 1980 with the publication of *Performance Zoning* by Lane Kendig (1980). It was the first comprehensive treatment on the subject complete with model provisions, and it stimulated a wider interest in this approach.

There are two important advantages to performance-based planning.

- *Flexibility in use and design.* The removal of use restrictions permits the mixing of uses while protecting property values and neighbourhood characteristics. This allows the developer to respond better to the demands of

the marketplace. The removal of lot restrictions, setbacks and other dimensional specifications allows greater variation and innovation in design and technology.

- *Rational approach to land use control.* Since the basis for land use decisions is a quantitative requirement, it avoids the potential for arbitrary regulation. It also eliminates "elaborate and costly discretionary devices" that have become part of zoning over time (Porter et al., 1988: 8).

As with any alternative approach, some disadvantages have been cited as well. A performance-based approach may be more onerous from administrative, technical and enforcement standpoints. This is a result of two important considerations. First, technical data requirements may be more significant than a conventional zoning approach, and the accuracy of measurements and the interpretation of findings are key. Second, due to potentially more significant technical requirements, it follows that there may be a greater need for trained, expert staff.

Chapter 3 looks at why performance-based planning was adopted in each of the municipalities studied here.

3. WHY PERFORMANCE-BASED PLANNING?

Why is performance-based planning being used by the jurisdictions studied here? The answer is not a simple one since the contexts that brought about its implementation vary widely. In some cases, it is the result of senior government policy. In others, it is strictly a local initiative. The issues to be addressed by performance-based planning differ as well, from growth management to design, from environmental protection to streamlining development.

It is important to understand the contexts surrounding the introduction, adoption and implementation of performance-based planning in each of the jurisdictions studied here. An understanding of these contexts sheds light on what may be necessary for the successful introduction, adoption and implementation of this approach in Canada. The purpose of this chapter is to familiarize the reader with these contexts. Effectively, this is a chronology of events in Australia, New Zealand and the United States.

Australia

In the late 1980s, after almost a decade of depressed housing values, Australia experienced a property boom rivalling that of the postwar period. The return of investment to the property market coincided with very high levels of immigration. The result was skyrocketing housing prices due to pent-up demand, particularly in the greater Sydney area. In 1989, the commonwealth government convened the Premier's Conference on Housing in an effort to respond to this crisis. The result was a recognition that:

- land must be used more efficiently;
- massive capital investment in infrastructure in the fringe areas of the capital cities could not continue; and
- something must be done to stem the movement of population from established areas to fringe locations.

With that, urban consolidation became the main thrust of planning policy in Australia. Urban consolidation is about moving people back into urban areas through higher density residential development. It was seen as the key to addressing housing affordability, as well as promoting the use of existing infrastructure capacity.

Soon after the conference, the Joint Venture for More Affordable Housing program was launched and a discussion paper circulated. This paper proposed the idea of a national framework of performance-based planning principles and procedures for high-quality residential development. Dubbed the Australian Model Code for Residential Development or AMCORD, it was well received by major industry groups and professional organizations. By 1990, a working document was released that focussed on improving the quality of residential development in greenfield projects where the lot area per dwelling was greater than 300 m².

In late 1992, AMCORD Urban: Guidelines for Urban Housing was launched by the commonwealth government as part of a $1 billion program involving all levels of government to create strategic plans, fund urban renewal projects and determine new criteria for infrastructure requirements. AMCORD Urban picked up where the previous working document left off. It better addressed the goal of urban consolidation by focussing on the design, planning and engineering of higher density residential development in established areas. It also stressed the importance of integrated (strategic) planning.

The promotion of performance-based planning by AMCORD Urban encouraged the development industry to go beyond simple subdivision and consider site-specific design, public open space, streetscapes, landscaping, privacy, security and other matters generally considered to be incompatible with a prescriptive regulatory approach.

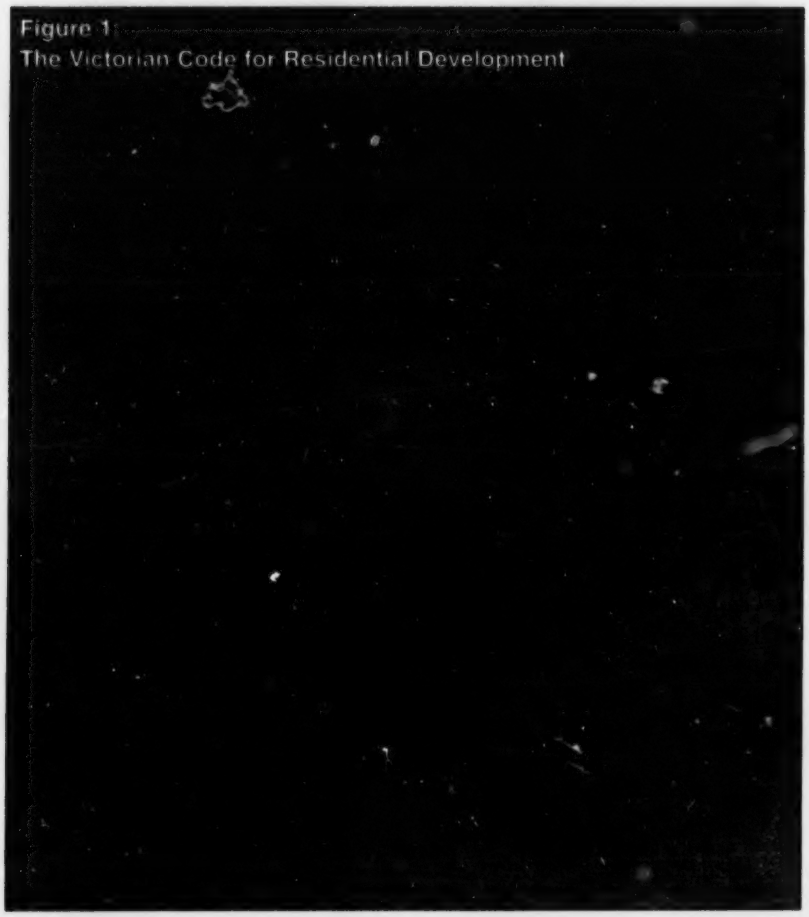
Finally in 1995, all previous versions of AMCORD were consolidated after considerable research, review and public input. The Code has evolved over time to reflect this. As a best practice document, AMCORD provides:

- a process to achieve more efficient, responsive and sustainable approaches to housing at the local level;
- a means to improve housing quality and choice and ensure a high level of integration with other elements of the urban environment; and
- a framework of principles and processes to ensure a consistent regulatory environment for those seeking project approval (Australia, 1995: 1).

The commonwealth government continues to work closely with the state/territory and local governments, professional associations and the development industry to promote AMCORD and the performance-based planning approach as a means of addressing issues of national concern. To date, planning in Australia is moving toward the best practice approach advocated by AMCORD, and several court decisions have upheld the application of performance-based planning standards. As this is written, every state/territory government in Australia has adopted its own model code based on AMCORD.

The states of Victoria and New South Wales are the most advanced in their adoption and implementation of performance-based planning. The events leading to the adoption of an AMCORD-based model code in each state are briefly described here.

Figure 1
The Victorian Code for Residential Development



State of Victoria

In the State of Victoria, sweeping economic and regulatory reforms in the early 1990s included fundamental changes to the planning system. In an effort to reduce complexity and enhance flexibility, a state-wide format for planning schemes was adopted. It was hoped the new format would also result in a more consistent, streamlined planning process, thus reducing the need for site-specific amendments.

At the same time, the City of Melbourne had begun to apply performance-based standards as part of its new planning scheme. Recognizing the value of this alternative approach, and the fact that AMCORD promoted it as best

practice, the Victoria government took the opportunity to promote performance-based planning as a means of addressing a number of its own goals for planning and development.

In 1993, the state introduced the Victorian Code for Residential Development—Multi-dwellings, or VicCode. VicCode provided the basis for assessment of all medium-density planning applications in the Melbourne metropolitan area. VicCode was held as a model for use across Victoria, and within one year of its release, the Code was reviewed to incorporate application experience, court challenges and professional input. The result was *The Good Design Guide for Medium-Density Housing*, or MDH Guide. The Guide is now mandatory in Victoria.

The City of Melbourne in Victoria served as a study municipality. Although the use of performance-based planning in Melbourne predates VicCode, the City's planning scheme more fully integrates the overall goals of the state code, because it must do so by law.

State of New South Wales

In New South Wales, the government launched an all out attack on urban sprawl in the late 1980s. And, while the Sydney metropolitan area was the focus early on, the government has since turned its attention state-wide with urban consolidation now the primary policy thrust of the state Department of Urban Affairs and Planning. Sprawl in New South Wales concerns the state government for three reasons.

- Take-up of agricultural lands on the rural-urban fringe has been rapid, raising concerns about the loss of agricultural resources and lifestyle.
- The cost of servicing fringe areas with roads, sewers and water supply is very high.
- The changing demographic make-up of Australia means smaller households demanding greater housing choice and affordability.

Multi-unit residential development is touted as the best way to increase density, reduce sprawl and meet the needs of the new consumer. The difficulty with this approach is a history of very poorly conceived examples of multi-unit residential development in Australia, due mostly to a lack of experience and appropriate planning controls. To assuage the residents of established neighbourhoods, who see this type of development as a threat, and to achieve its goal of urban consolidation, the state produced the NSW Model Code.

The Code promotes the adoption by local councils of a consistent performance-based code for multi-unit housing. Use of the Code's format and terminology (largely similar to that of (AMCORD) is encouraged. The Code represents an entirely new approach in the state, but unlike earlier attempts to impose urban consolidation strategies on local councils, and unlike the situation in Victoria, the NSW Model Code is voluntary.

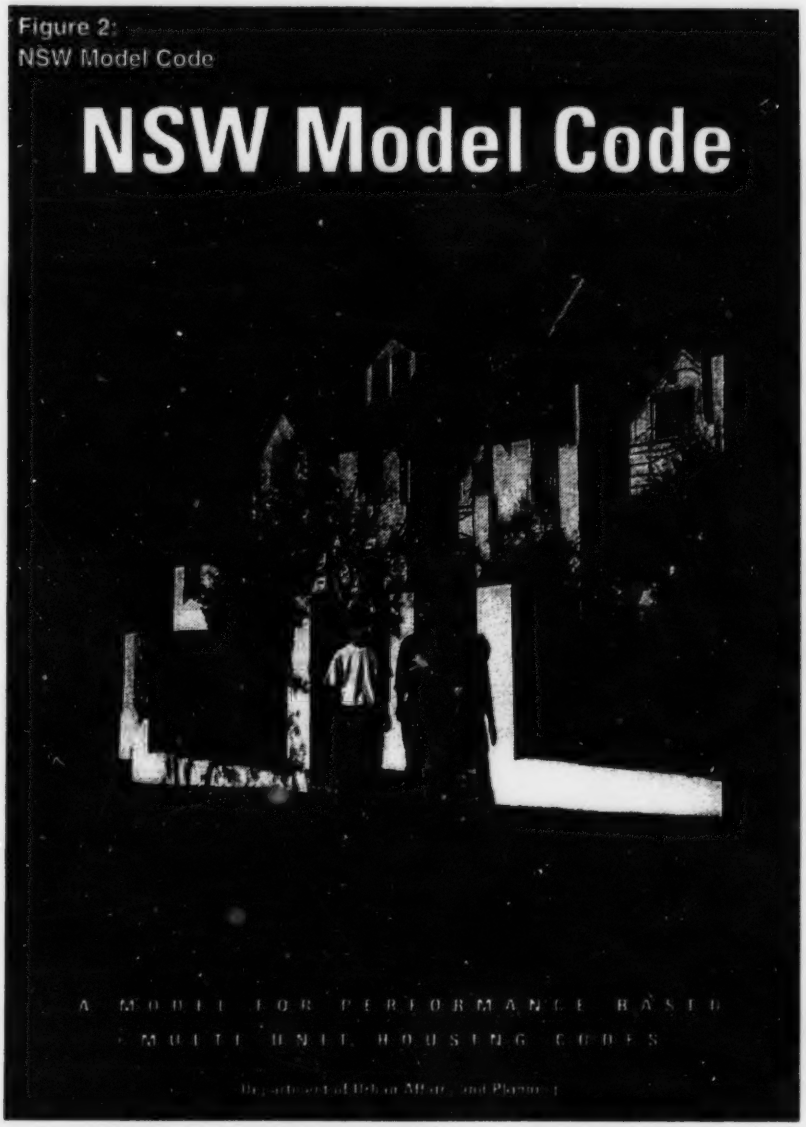
The City of Armidale in New South Wales served as a study municipality. The primary reason for adopting a performance-based planning scheme in Armidale was to address local concerns regarding the handling of multi-unit residential development. The state-wide promotion of the approach as best practice was a contributing factor.

New Zealand

The deregulation of the New Zealand economy in the mid-1980s is well documented. In 1984, a newly elected Labour government set about making radical and sweeping reforms to government and the economy. In its first term of office, the government completely reorganized the public service and commercialized many public activities. During its second term, two other very important reforms were pursued: environmental law and local government.

With respect to the reform of environmental law, the *Resource Management Act* (RMA) was proclaimed in 1991 after extensive review and

Figure 2:
NSW Model Code



consultation. The RMA was the first piece of legislation in New Zealand to make sustainable management a clear duty of government. The natural environment is very much the focus of the Act, with social and economic issues receiving a lesser priority. The Act is in keeping with the central government policy of staying out of the lives of its citizens and minimizing intervention in personal property rights. In fact, there is a clear presumption in favour of development unless justified by a local authority that it should not proceed.

Local government was also reformed with amalgamation reducing the number of authorities in New Zealand from more than 800 to only 74 district and city councils and 16 regional authorities. These authorities are responsible for administration of the RMA—the regional districts for land, air, water, soil and coastal management, and the district and city councils for land use, noise and subdivision control. While a hierarchy of plans and policy statements is set out in the RMA, as are basic requirements for coverage in the plans, the RMA is not prescriptive. No standardized approach to the drafting of local and regional plans is suggested, although the Ministry for the Environment responsible for the Act did produce guidelines to assist in the implementation. The result: local and regional authorities are free to interpret and implement the Act through their own plans as they see fit.

This interpretation of the RMA by local and regional authorities has resulted in a variety of approaches. These include the traditional town and country style of planning with activity listing, one that remains popular with smaller councils without the resources to take on a new and more complex approach. Some authorities are using a hybrid of town and country and effects-based planning approaches. Fewer authorities still apply full effects-based (performance) planning.

The City Council of Christchurch and the District Council of Waitakere City represent the most advanced local authorities in New Zealand for adoption of effects-based plans. These authorities served as the study municipalities for New Zealand.

United States

Unlike jurisdictions in Australia and New Zealand that adopted performance-based planning as a result of senior government policy, municipalities in the United States adopted the approach as strictly a local initiative. The following briefly outlines the contexts surrounding the introduction, adoption and implementation of performance-based planning in each of the study municipalities.

Bucks County, Pennsylvania

Bucks County pioneered performance-based planning when, in 1973, it adopted a model zoning ordinance with a performance component to protect natural resources and provide flexibility in the design of residential development. Two significant trends resulted in the drafting of the performance-based code.

First, there was increasing awareness and concern in the community about the environment and its protection from development. The gently rolling natural and agricultural landscapes of the county demanded protection as ex-urbanites flocked to new rural residential developments.

Second, local municipalities in the county were under pressure to satisfy the state-mandated zoning requirement to provide for all legitimate land uses. Failure to do so meant risking a legal challenge proposing a curative amendment. Since many early local zoning ordinances in the county were exclusionary of higher density residential developments, landowners were proposing curative amendments as a means of maximizing development opportunities on their property. Performance zoning was recognized as a means of not only protecting natural resources, but also permitting a full range of housing types.

Performance zoning was heavily promoted by county staff to local municipal officials and more than 30 of the 54 townships have since adopted a performance component as part of their zoning ordinance. The code was produced in the form of a model ordinance and was picked up by several municipalities across the United States, including Largo, Florida, whose performance-based zoning ordinance borrows heavily on the model.

Fort Collins, Colorado

In the mid-1970s, a comprehensive planning process began to set the foundation for a new plan for Fort Collins (Porter et al., 1988: 158). Four hypothetical growth alternatives were devised during preparation of the new plan's land use element. The "moderate growth, concentrated land use pattern" alternate received the stamp of approval during public hearings.

A task force of city staff and business group representatives set out to draft appropriate land use policy in support of the approved alternative. The result was a citizen's ballot initiative to limit growth to 750 residential permits annually (Porter et al., 1988: 158). While the ballot initiative was soundly defeated, the public asked that the growth management policies be tried and tested. This became the land use policies plan, one of several elements forming an overall land use system adopted by the city in 1979.

The land use policies plan reflected a new way of thinking about growth by managing development at the fringe, and by promoting a more compact urban form through mixed use, in-fill and higher density development. At the same time, a review of the regulatory system found it inconsistent with what the policies plan was trying to encourage. The city wanted a system that was responsive to market forces on one hand and, on the other, offered some quality control over what was going to happen on a site. And, since the policies plan encouraged a mix of uses, compatibility became a major issue.

The result of the regulatory review was the Land Development Guidance System (LDGS), which provides performance criteria for planned unit

developments as an alternative to conventional zoning (Porter et al., 1988: 161). A point system is used to determine the value of each development proposal.

Largo, Florida

A pro-growth climate and the employment of professional planning staff in the mid-1970s prompted the adoption of a performance-based code here (Porter et al., 1988: 184). In 1977, a new planning director began to consider the city's dozens of development ordinances that were unclear and sometimes conflicting. At the same time, the city seemed unprepared to handle the rapid development beginning to occur in the area.

A new comprehensive plan was adopted in 1980, and staff recommended production of a single, comprehensive development code based on performance standards (Porter et al., 1988: 184). City staff hoped a new approach would provide an opportunity to promote growth while protecting residents. Staff also recognized the importance of streamlining the regulatory process and ensuring a level of consistency with respect to how the process is administered.

By adapting Lane Kendig's (1980) performance zoning model, as well as new administrative and legislative procedures out of the University of Oregon Bureau of Government Research, an entirely new planning scheme was devised (Porter et al., 1988: 184). The Comprehensive Development Code was adopted in 1983. Some more significant aspects of the Code include a larger number of uses in each use category, the measurement of density by units per acre rather than by housing type and the control of site use through impervious surface and floor/area ratios rather than setbacks, height limits and minimum lot dimensions (Porter et al., 1988: 185). More zoning decisions are also shifted to administrative review from legislative review.

Chapter 4 provides excerpts of performance standards from the Code of each study municipality.

4. HOW PERFORMANCE-BASED PLANNING IS USED

According to the performance-based planning approach, the determination of land use location is based on the actual physical characteristics and functions (performance) of a use measured against predetermined standards (Porter et al., 1988: 11). Ideally, these standards are quantitative measures of development impact and are to be administered without discretion. Using this approach, it is possible to locate any use adjacent to any other, provided it satisfies the performance standards.

The performance-based planning approaches presented here differ depending on the goals of implementation. Is the goal growth management or design? Is it environmental protection or streamlined development? Is it a combination of goals? This chapter briefly describes the planning scheme in each study municipality. Excerpts of the performance standards in each municipality's code are provided as an example of what is possible.

Australia

As described in Chapter 3, the promotion of performance-based planning in Australia was initiated by the commonwealth government through its Australian Model Code for Residential Development, or AMCORD. In an effort to advance the planning, design, assessment and implementation of residential development, AMCORD is centred on objectives and desired outcomes (performance), instead of the specification of prescriptive standards (Australia, 1995: 1). This best practice document for residential development is intended for adaptation by the state/territory and local governments to produce local codes, policies and regulations as needed.

Each state/territory government in Australia has now adopted its own AMCORD-based model code. The State of Victoria's VicCode and the State of New South Wales' NSW Model Code differ very little from the national code with only minor tailoring of the standards to reflect local conditions and concerns. As a result, excerpts from AMCORD are presented here.

The process under AMCORD

AMCORD promotes a performance-based approach to land use control as an alternative to the specification of prescriptive regulatory standards. It does so by focussing on matters to be addressed (performance criteria) in order to achieve desired development objectives (Australia, 1995: 4). Developers can take advantage of flexibility and design to the performance criteria without being held back by restrictive regulations. As an alternative, they can also take advantage of certainty and design to a series of acceptable solutions—examples of how to achieve the desired result. It is possible to design to performance for some elements and design to acceptable solutions for others.

Step 1—development context and site analysis

As part of the integrated planning process promoted by AMCORD, it is necessary to establish the development context and complete a detailed site analysis before the design elements are even considered. The development context involves four factors:

- planning and development intentions for the site;
- the relationship of the site to the local community;
- the relationship of the site to adjoining properties; and
- the physical characteristics of the site.

A site analysis plan is completed to present graphically the key influences on the design and how the proposed dwellings will relate to each other and to the immediate surroundings. The site analysis section of the NSW Model Code clearly outlines the site analysis considerations. Ideally, a written statement explaining how the design

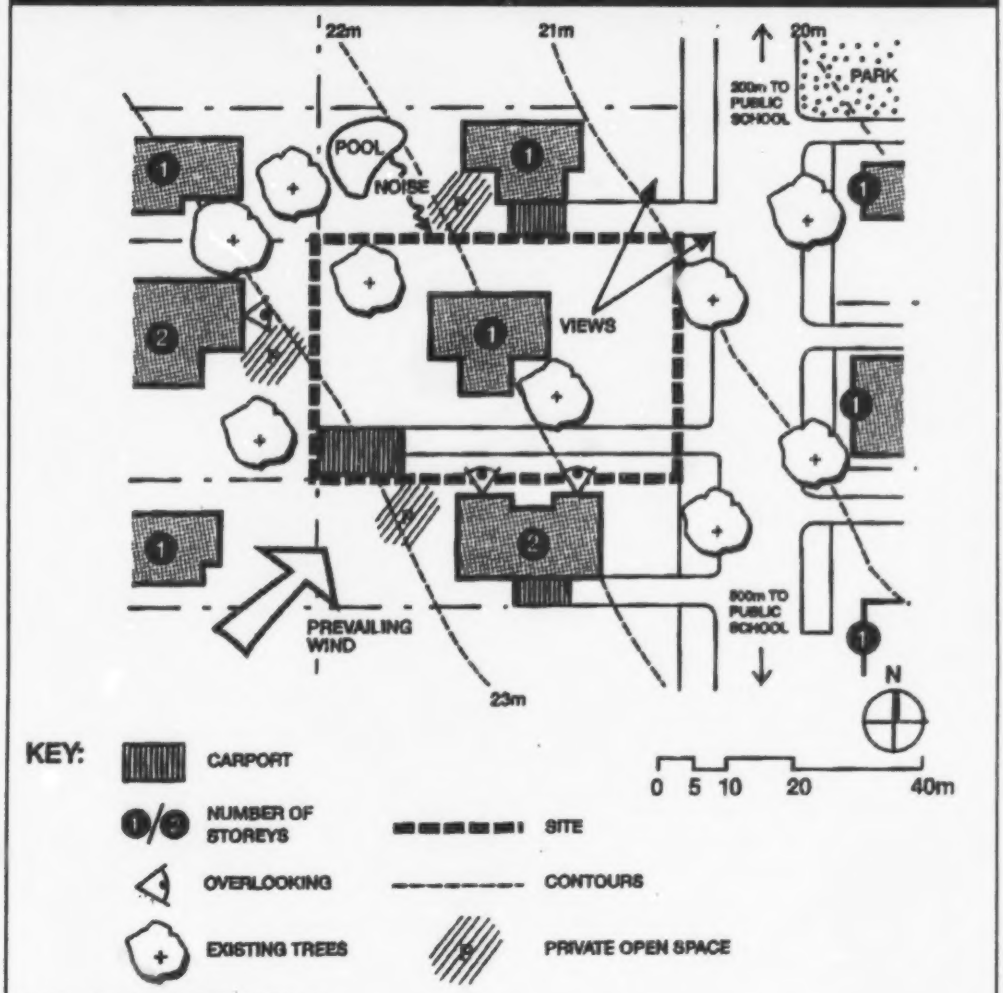
responds to the site analysis would be submitted as part of the application materials.

Step 2—performance criteria and acceptable solutions

Once the development context is determined, and the site analysis complete, it is possible to begin site planning and design. The developer can choose to design to the performance criteria, to the acceptable solutions, or both.

The performance criteria are the heart of the AMCORD approach. The criteria are contained in a series of design elements that provide the basis for regulation. There are two main groups of design elements: 12 neighbourhood planning and infrastructure elements to address neighbourhood planning and movement networks, physical infrastructure and stormwater and integrated catchment management, and 17 streetscape, site planning and design elements to address streetscape and neighbourhood character, and site planning and building design.

Figure 3:
Site Analysis Key in Determining the Development Context



Source: New South Wales, 1997: 7)

Each design element is presented in the same format. First, there is a general statement of the overall intent of applying the element. Then, the intent is clarified by the performance criteria which indicate the means of achieving compliance with the design element. Not every element will be relevant for every project. Finally, the acceptable solutions provide examples of ways in which the performance criteria may be achieved. Not every design element includes acceptable solutions. Element 5.5—Privacy is provided here as an example (Australia, 1998: 166-171).

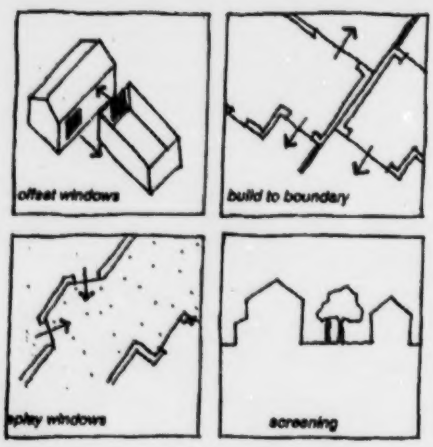
Element 5.5—Privacy: This element is one of 14 that addresses various aspects of site planning and building design. It includes performance criteria for both visual and acoustic privacy.

Step 3—Processing

With the site planning and design complete, the developer submits the design along with the development context and site analysis plan for assessment by the municipality. AMCORD recommends that the developer work closely with the municipality throughout the site planning and design phase to avoid any surprises in the final product. The application is then assessed based on the ability of the design to achieve the relevant performance criteria or acceptable solutions.

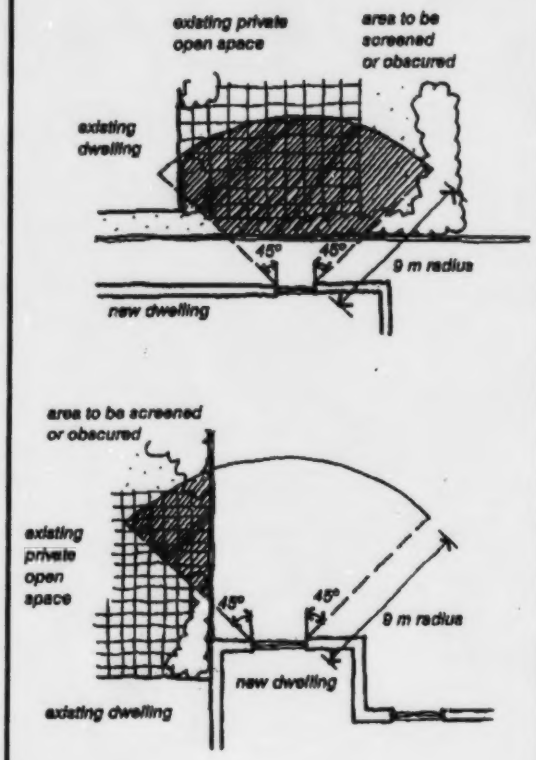
PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
The intent may be achieved where:	The acceptable solutions illustrate ONE WAY of meeting the associated performance criteria.
P1 The privacy of buildings and outdoor spaces is protected taking into account projected community expectations.	
Visual Privacy	**Visual Privacy**
P2 Direct overlooking of main internal living areas and private open spaces of other dwellings is minimized by building layout, location and design of windows and balconies, screening devices and landscape, or remoteness. Effective location of windows and balconies to avoid overlooking is preferred to the use of screening devices, high sills or obscured glass. Where these are used, they should be integrated with the building design and have minimal negative effect on residents' or neighbours' amenity.	**A2.1** Habitable room windows with a direct outlook to the habitable room windows in an adjacent dwelling within 9 m: • are offset from the edge of one window to the edge of the other by a distance sufficient to limit views into the adjacent windows; • have sill heights of 1.7 m above floor level; or • have fixed obscure glazing in any part of the window below 1.7 m above floor level. AND **A2.2** Outlook from windows, balconies, stairs, landings, terraces and decks or other private, communal or public areas within a development is obscured or screened where a direct view is available into the private open space of an existing dwelling. If screening is used, the view of the area overlooked must be restricted within 9 m and beyond a 45°angle for the plane of the wall containing the opening, measured from a height of 1.7 m above floor level. No screening is required where: • windows are in bathrooms, toilets, laundries, storage rooms or other non-habitable rooms and they have translucent glazing or sill heights of at least 1.7 m; • windows are in habitable rooms and they have sill heights of 1.7 m or more above floor level or translucent glazing to any part of a window less than 1.7 m above floor level. AND

Figure 4
Locating windows to limit overlooking



PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS

Figure 5
Screening views to adjacent private open



Visual Privacy (continued)

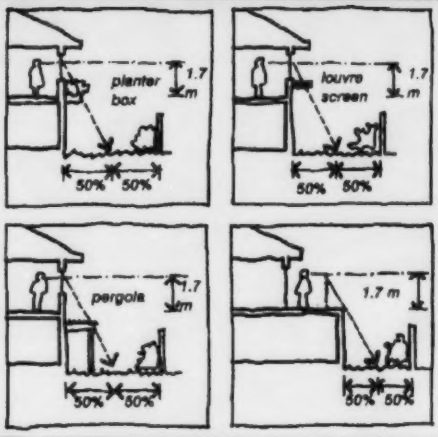
A2.3 Windows and balconies of an upper-level dwelling are designed to prevent overlooking or more than 50 per cent of the private open space of a lower-level dwelling directly below and within the same development (see Figure 5).

AND

A2.4 Direct views described in A2.2 and A2.3 may be obscured by solid translucent screens or perforated panels or trellises which have a maximum or 25 per cent openings, and which are:

- permanent and fixed;
- of durable materials; and
- designed and painted or coloured to blend in with the development.

Figure 6
Providing privacy to a lower unit's private open space



Acoustic Privacy

P3 Site layout separates, by way of barriers and/or by distance, active recreational areas, parking areas, vehicle accessways and service equipment areas from bedroom areas of dwellings, and minimizes high levels of external noise entering dwellings.

P4 Dwellings close to high-noise sources (busy roads, railway lines, airport flight paths or industry) should be designed to locate noise-sensitive rooms and secluded private open spaces away from noise sources, and be protected by appropriate noise-shielding techniques.

P5 Building design assists in minimizing the transmission of sound through the building structure, and particularly protects sleeping and living areas from possible noise intrusion.

Acoustic Privacy

(in partial satisfaction of P3)

A3 Bedroom windows are at least 3 m from shared streets and driveways and parking areas of other dwellings.

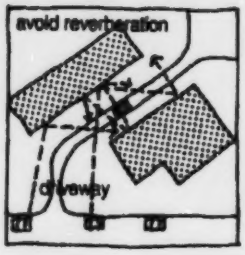
(in partial satisfaction of P5)

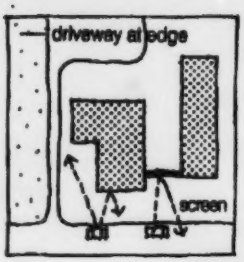
A5.1 Bedrooms of one dwelling do not share walls with living rooms or garages of adjacent dwellings.

AND

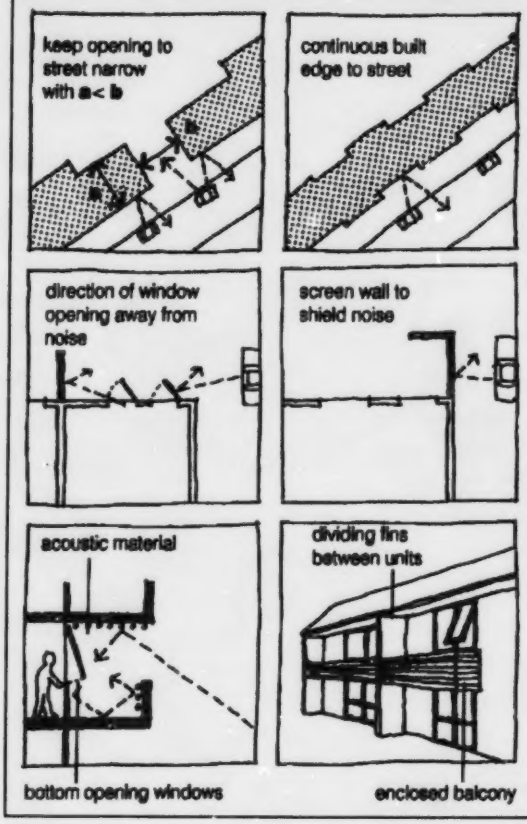
PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
Acoustic Privacy (continued)	Acoustic Privacy (continued)

Acoustic privacy begins with site and dwelling layout and is reinforced in building design





A5.2 Shared walls and floors between dwellings are constructed in accordance with the noise transmission and insulation requirements of the Building Code of Australia.


keep opening to street narrow with a< b
continuous built edge to street
direction of window opening away from noise
screen wall to shield noise
acoustic material
dividing fins between units
bottom opening windows
enclosed balcony

The difficulty with AMCORD, and its progeny, is that the performance criteria in many instances are not quantitative standards, but general statements of the objectives to be achieved. For instance, performance criterion P1 is a general statement with no acceptable solution provided. While this approach is intended to give the developer maximum flexibility in project design, the difficulty comes during project assessment when the municipality must interpret the performance of the design in achieving the criteria.

To reduce the vulnerability of this approach to interpretation, AMCORD clearly states that the explanation of the performance criteria should be provided up front, as derived from a strategic or development plan process (Australia, 1988: 54). The intent is to support a strong link between the objectives and the desired outcome. Basically, transparency of policy and process is demanded here.

New Zealand

The City of Christchurch and the District of Waitakere City are the two most advanced jurisdictions in New Zealand having adopted a fully effects-based (performance) planning approach. The adoption in both jurisdictions of this approach is a direct result of the New Zealand government's passing of the *Resource Management Act* of 1991. The Act promotes the sustainable management of natural and physical resources and, although local authorities may implement the Act as they see fit, there is some indication that the application of performance standards is preferred over that of activities listed under the old town and country planning approach. The planning scheme and application of performance standards in each jurisdiction are outlined below.

City of Christchurch

The City of Christchurch is the largest city on South Island with a population of 315,000. In recent years, the City has been a major growth centre in New Zealand. The adoption of a fully effects-based planning scheme represents a significant shift from the previous town and country approach.

Under the old scheme, districts of common character and use patterns were designated as the basis for development control. Each district had its own list of permitted, conditional and specified departure activities. Under the new effects-based scheme, "zones" are designated to achieve common environmental results. These zones are based broadly on the purpose for which land in each zone is used. A series of performance standards form the rules for each zone.

Performance standards regulate proposed activities according to the scale of their effects on the environment (Christchurch, 1995: v. 2, p. 15/5). The performance of a proposed activity measured against these standards determines the need for a resource consent. For instance, in living zones (residential), the expected environmental results are reflected in performance standards emphasizing the density and bulk of buildings, noise intrusion, traffic generation, residential coherence, etc. In highly sensitive natural environments, a higher degree of control is imposed to ensure protection of significant features. In business zones (commercial), intervention is minimal so a wide range of potential activities can develop, reflecting the less sensitive nature of these environments (Christchurch, 1995: v. 2, p. 15/5).

Thus, the zones differentiate on the basis of acceptable activities and their level of effects. In this way, it is possible to protect and enhance the desirable aspects of each zone's distinctive character.

Activity categories for processing

The status of any proposed activity is determined by its environmental effects and the scale at which these effects occur. Each proposal is assessed differently depending on the nature of the activity, the zone in which it is to be located, and the actual and potential effects it will have on the environment. The performance of each proposal is measured against the relevant standards that make up the rules for that particular zone. There are six activity categories, listed here in descending order.

- *Permitted activities.* These proposals comply with all performance standards. Generally, the dominant activities in each zone comply with the performance standards and are permitted.

- *Controlled activities.* These proposals comply with all the critical performance standards and community performance standards, but do not comply with one or more of the development performance standards. These standards express moderate actual or potential adverse effects on adjacent sites.

- *Discretionary activities.* These proposals comply with all the critical performance standards but do not comply with one or more of the community performance standards or development performance standards specified

in the plan. Community standards express more moderate actual or potential adverse effects on a neighbourhood scale or a significant impact on adjacent sites.

- *Non-complying activities.* These proposals do not comply with one or more of the critical performance standards specified in the plan. These standards express significant actual or potential adverse effects over a wide area, and whether these effects are one-time only or cumulative.

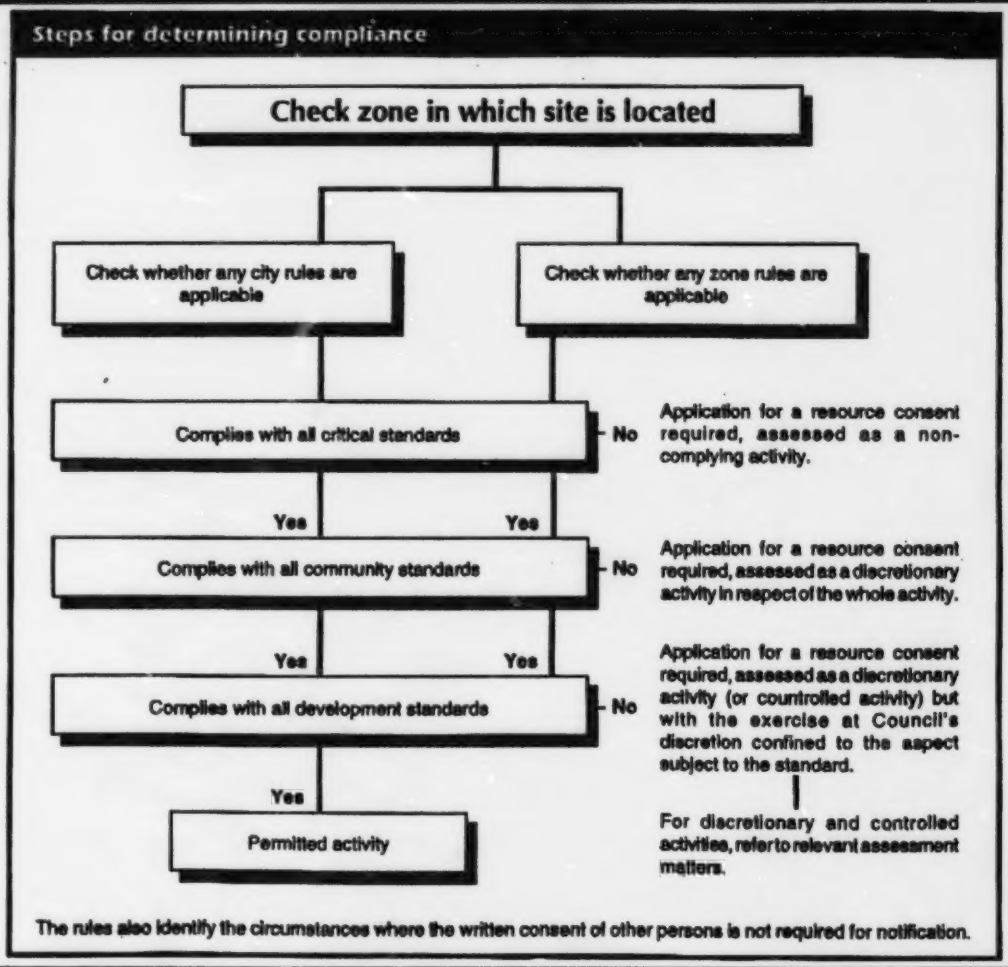
- *Prohibited activities.* There are few prohibited activities in the plan. No application may be made for a prohibited activity.

- *Subdivision activities.* As with other applications, these proposals may be categorized as non-complying, discretionary or controlled subdivisions (Christchurch, 1995: v. 3, p. 3).

The process

Before submitting an application, the developer must determine the compliance of the proposal with the various rules and standards set out in the plan (i.e., by assessing the effects of the project on the environment). The steps for determining compliance are outlined here (Christchurch, 1995: v. 3, p. 6).

Figure 10:
City of Christchurch City Plan


Steps for determining compliance
Check zone in which site is located
Check whether any city rules are applicable
Check whether any zone rules are applicable
Complies with all critical standards
No
Application for a resource consent required, assessed as a non-complying activity.
Yes
Yes
Complies with all community standards
No
Application for a resource consent required, assessed as a discretionary activity in respect of the whole activity.
Yes
Yes
Complies with all development standards
No
Application for a resource consent required, assessed as a discretionary activity (or countrolled activity) but with the exercise at Council's discretion confined to the aspect subject to the standard.
Yes
Permitted activity
For discretionary and controlled activities, refer to relevant assessment matters.
The rules also identify the circumstances where the written consent of other persons is not required for notification.

The rules

The following are excerpts from the rules for various living zones. The plan identifies 10 distinct living zones. Each zone is described with respect to its location, boundaries, purpose and environmental results anticipated for development.

Living Zone 1 (Outer Suburban) and Living Zone 2 (Inner Suburban) are included here. These excerpts highlight the various performance standards that form the rules. These standards vary depending on the nature of the activity and the actual and potential effects it will have on the environment. Excerpts of the development, community and critical standards are provided here.

District of Waitakere City

Waitakere City was created in 1989 as part of the New Zealand government's sweeping local government reform. Four former district councils were combined to form the new council. Waitakere City is a suburban community in the Auckland region and is home to roughly 156,000 residents.

Waitakere City has also adopted a fully effects-based planning scheme that regulates the environmental effects of proposed activities rather than the activities themselves. The scheme classifies proposed activities as either residential or non-residential. It also divides the entire jurisdiction into two distinct overall areas or zones. Human environment areas comprise

2.1 Categories of Activities
(Not included here)

2.2 Development Standards
(Subsections 2.2.1 [site density], 2.2.2 [open space], 2.2.3 [building height] and 2.2.9 [outdoor living space] are included here) (Christchurch, 1995: v. 3, pp. 2/13, 2/15-2/16).

2.2.1 Residential site density—residential activities
Each residential unit shall be contained within a site with a minimum net area as follows:

Living 1 Zone	450 m²
Living 2 Zone	300 m²

except that

a) in the Living 1 Zone...for residential units which comply with all other applicable development standards each residential unit shall be contained within a site with a minimum net area as follows:

Living 1 Zone	400 m²

The applicable development standards are:

Part 9 of the General City Rules, Clause 5.2 referring to filling, excavation and building adjacent to waterways, the coastline and in the floodplain and ponding areas; and
Part 13 of the General City Rules, Clause 2.2 referring to parking and loading, and Clause 2.3 referring to site access.

b) in the Living 1 and 2 zones for any elderly persons housing unit with a gross floor area less than 65 m² the minimum net area for any site shall be 200 m²...

2.2.2 Open space—residential and other activities
Maximum percentage of the net area of any site covered by buildings shall be as follows:

	Other activities and residential activities with garage provided	Residential activities without garage provided
Living 1 Zone	35%	35% less 18 m²
Living 2 Zone	40%	40% less 18 m²

except that

a) in the Living 2 Zone where the height of the building does not exceed six metres the maximum shall be 45 per cent;
b) for nursery and market gardens the maximum shall be 55 per cent.

2.2.3 Building height—residential and other activities
Maximum height of any building shall be:

Living 1 Zone	8 m
Living 2 Zone	8 m

...

2.2.9 Outdoor living space—residential activities
a) Each residential unit shall be provided with an outdoor living space, contained within the net area of the site with a minimum area and dimensions as follows:

	Minimum Area	Minimum Dimension
Living 1 Zone	75 m²	4.5 m
Living 2 Zone	50 m²	4 m

except that

...

(ii) residential units in the Living 2 Zone without a room on the ground floor may as an alternative to the above outdoor living space provide a balcony with a minimum area of 7 m² and a minimum dimension of 1.5 m;

(iii) for any elderly persons housing unit with a gross floor area less than 65 m² the minimum requirements shall be 30 m² for each unit with a minimum dimension of 3 m;

...

b) The required minimum area of outdoor living space or balcony shall be designed to receive sunshine in mid-winter and be readily accessible from a living area of each unit.

2.3 Community standards (other activities only)

(Subsections 2.3.1 [residential coherence], 2.3.2 [site size] and 2.3.4 [traffic generation] are included here) (Christchurch, 1995: v. 3, p. 2/17).

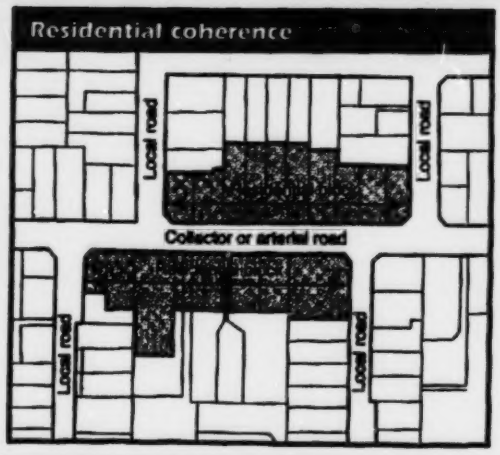
2.3.1 Residential coherence—other activities

At least one person engaged in the activity shall reside permanently on the site, except where the activity is an educational, spiritual, day-care or health facility and is located

a) within a community footprint; or

b) on a front site, with frontage to a collector or arterial road and

(i) any residential activity on an adjoining front site or front site separated by an access with frontage to the same road is left with at least one residential neighbour (For the purposes of this clause, the residential neighbour shall be on an adjoining front site separated by an access and have frontage to the same road.); and



(ii) sites in that residential block.

2.3.2 Site size—other activities

Maximum net area of any site for activities other than residential activities shall be 1,100 m2 except that this area may be exceeded

a) where the activity is located in a community footprint; or

b) where the entire activity is located in a building and occupies not more than 40 m² of floor space and at least one person engaged in the activity resides permanently on the site; or

c) for nursery and market gardens; or

d) for public reserves without buildings.

...

2.3.4 Traffic generation—other activities

a) Maximum number of vehicle trips per site shall be:

(i) sites where access is shared with at least one other site:

Heavy vehicles	two per week
Other vehicles	10 per day

(ii) sites with frontage to local roads, other than (i) above:

Heavy vehicles	two per week
Other vehicles	20 per day

(iii) all other sites:

Heavy vehicles	four per week
Other vehicles	50 per day

except that

(iv) on sites within community footprints, the maximum number of vehicle trips shall be:

Heavy vehicles	eight per week
Other vehicles	100 per day

b) Vehicles, other than heavy vehicles, associated with any residential activity on the site shall be included in determining the number of vehicle trips to and from any site. Vehicles parking on the street or on any other site, in order that their occupants can visit the site, shall also be included in determining the number of vehicle trips to and from any site.

A proposed activity in Living 1 Zone or Living 2 Zone that does not achieve a critical standard is assessed as a non-complying activity. A resource consent is needed. The critical standards to be considered in Living Zone 1 or Living Zone 2 include:

- excavation and filling of land;
- airport protection surfaces;
- protected building, places and objects;
- protected trees;
- outdoor advertising;
- noise;
- glare;
- hazardous substances;
- ground level concentration of contaminants; and
- subdivision.

Excerpts of these critical standards are provided below.

PART 11—HEALTH AND SAFETY

(Excerpts from Sections 1.3 [Noise Control] and 2.3 [Control of Glare] are included here) (Christchurch, 1995: v. 3, pp. 11/3—11/4, 11/9).

1.3 Specific Rules—Noise Control

1.3.1 Standards for the control of noise and zone groupings

Noise standards are specified for groups of zones according to the zone environment and its sensitivity to noise...

1.3.2 Noise standards—Group 1 zones and sites containing scheduled activities (most noise sensitive zones)

a) Any activity which does not exceed the noise standards specified in sub-clause (c) below shall be a permitted activity.

b) Critical standard
Any activity which exceeds the noise standards specified in sub-clause (c) below shall be a non-complying activity.

c) Noise standards

(i) At the boundary of any site the steady sound level from activities on that land shall not exceed 49 dBA L10 measured or assessed on an hourly basis between the hours of 0700-2200 and 42 dBA L10 measured or assessed on an hourly basis between 2200-0700. In any case, where an activity producing steady sound on land operates over a 24-hour period the Ldn shall not exceed 50 dBA.

(ii) At the boundary of any site the steady sound level with stepped variations of level, or cyclic sound level, or fluctuating sound from activities on that land shall not exceed 50 dBA Leq measured or assessed on an hourly basis between the hours of 0700-2200 and 41 dBA Leq measured or assessed on an hourly basis between the hours of 2200-0700.

(iii) At the boundary of any site the maximum sound level from activities on that land shall not exceed 75 dBA Lmax measured or assessed between the hours of 0700-2200 and 65 dBA Lmax measured or assessed between the hours of 2200-0700.

(Subsections 1.3.2—1.3.6 regarding noise standards for other zones are not included here.)

2.3 Specific Rules—Control of Glare

2.3.1 Standards for the control of glare and zone groupings
Glare standards are specified for groups of zones according to the zone environment and its sensitivity to glare...

2.3.2 Glare standards—Group 1 zones are most sensitive to glare and include living zones

a) Any activity which does not result in a greater than 2.5 lux spill (horizontal and vertical) of light shall be a **permitted activity.**

Critical standard

b) Any activity which results in a greater than 2.5 lux spill (horizontal and vertical) shall be a **non-complying activity.**

(Subsections 2.3.3—2.3.5 regarding glare standards for other zones are not included here.)

several sub-areas, including living environment, working environment, countryside environment and rural villages environment. Natural areas include general natural area, managed natural area, protected natural area and coastal natural area.

As with the Christchurch scheme, rules exist for each area according to its characteristics and the pressures on the local environment. City-wide and subdivision rules also exist. The performance of each proposal is measured against the relevant standards that make up the rules for a particular area. Where a proposed activity does not meet the standards, an application for resource consent is required, for which conditions may be imposed or the application refused.

Activity categories for processing

The categorization of proposed activities for processing and assessment is similar to the approach applied in Christchurch. A proposed activity is categorized depending on the nature of the activity (residential or non-residential), its location (human environment areas or natural areas) and the actual and potential environmental effects. However, the Waitakere City scheme differs from that of Christchurch in one key area: the level of discretion in considering a proposed activity. In Waitakere City, the focus of each activity category is the level of discretion that applies during consideration of the proposal, including the level of neighbourhood and community involvement. There are six activity categories, including the following in ascending order.

- *Permitted activities*. These proposals comply with all city-wide, natural areas and human environment areas rules, and do not require a resource consent application.

- *Controlled activities*. These proposals require a resource consent application, but the discretion of Council is limited to rules and terms of the plan with respect to that activity alone. Public notification and written consents are not required.

- *Limited discretionary activities*. These proposals require a resource consent application, but the discretion of Council is limited to rules and terms of the plan with

respect to that activity alone, and conditions may be imposed or the application refused. Public notification and written consents are not required.

- *Discretionary activities.* These proposals require a resource consent application, and are considered with respect to any rules and terms relating to discretionary activity set out in the plan, the overall policies and objectives of the plan, and any written consents received through public notification. Conditions may be imposed or the application refused.

- *Non-complying activities.* These proposals do not meet specific rules and terms set out in the plan and require a resource consent application. A resource consent cannot be granted unless Council is satisfied that adverse effects on the environment will be minor, or the granting of the consent will not be contrary to the objectives and policies of the plan. Conditions may be imposed or the application refused.

- *Prohibited activities.* There are few prohibited activities in the plan and no resource consent application may be made.

The applicant must determine the compliance of a proposal with the various rules and standards set out in the plan. The steps for determining compliance are very similar to those in Christchurch and are not included here.

United States

The adoption of performance-based planning in the American jurisdictions was strictly a local initiative. The result is a planning scheme designed specifically to meet the goals of the community, not those imposed by a senior level of government. The planning scheme and application of performance standards in each American jurisdiction are outlined below.

Bucks County, Pennsylvania

Bucks County is located along the northern boundary of the City of Philadelphia with a population of approximately 550,000. While southern portions of the county are urbanized, the central and northern portions remain mostly agricultural with rural residential development.

To protect natural resource areas and promote flexibility in the design of residential development, the Bucks County model ordinance promotes the use of performance zoning. Based on site-specific, quantifiable criteria, residential development is clustered on the least environmentally sensitive areas of a site in order to limit the amount of development intrusion. The remaining natural areas are protected as open space. And since the model ordinance provides for a full range of housing types, a designer has the flexibility to work with a site constrained by natural features and still achieve maximum density.

The model ordinance outlines the concept of development districts for residential zoning, of which there are four primary districts.

- *Development area.* Identified in the local comprehensive plan as appropriate for higher density development.

- *Urban area.* Boroughs, villages and other developed areas suitable only for in-fill projects.

- *Reserve area.* Lands suitable for development but generally not needed within the time frame of the local comprehensive plan.

- *Natural resource protection area.* Lands that include sensitive natural features (Bucks County, 1996: 7).

There are three secondary reserve area districts intended to maintain rural character, preserve environmentally sensitive areas, protect and

enhance the character of existing rural villages and protect the overall scenic quality of the area (Bucks County, 1996: 7). These secondary reserve area districts include the following.

- *Resource protection district (RP).* This district is intended to protect areas of sensitive natural features, such as woodlands, steep slopes, wetlands and flood plains. The standards for this district ensure permanent protection of these resources.

- *Rural agricultural district (RA).* This district is intended to provide for low-intensity development in rural areas until these areas are needed for development and are serviced. The use intensity for this district is limited to development not requiring urban services.

- *Rural district (R1).* This district is intended to provide for limited, low-density residential development in areas not served by public sewers and for which there is no demand for higher intensity development.

There are also three secondary development area districts intended to accommodate anticipated growth with coordinated provision of public services and facilities. These districts permit both residential and non-residential uses, provided adequate services are available (Bucks County, 1996: 8).

- *Suburban medium district (SM).* This district provides for medium-density residential development and encourages clustering and open space provision.

- *Suburban high district (SH).* This district provides for higher density residential development with higher intensities relating to adjacent developed areas with few natural limitations.

- *Urban residential district (UR).* This district is intended to retain the urban character of existing residential areas and provide for new development opportunities in a variety of housing types and densities.

Within each of these districts, a series of performance standards are used to protect natural resources and determine the appropriate level of development intensity on a site.

Natural resource protection standards

These standards require the protection of natural resources in all districts and for all uses by limiting the amount of development in each resource type. Each type of natural resource is assigned a percentage of open space protection. As this percentage of open space protection increases, the area suitable for development decreases. Table 1 outlines some of these performance standards.

Table 1
Natural Resource Protection Standards, Bucks County

Natural Resource	Proportion of Permitted Alteration
Flood plain (100-year interval)	0%
Flood plain soils	0%
Steep slopes • 15-20% slope • 25% or greater slope • Steep slope are less than 3,000 sq. ft.	 Up to 30% Up to 15% Exempt
Woodlands • In environmentally sensitive areas • Other areas	 Up to 20% Up to 50%
Tree protection zone	0%
Watercourses	0%
Wetlands	0%
Wetlands margin	Up to 20%
Lakes and ponds	0%
Lake and pond shorelines (measured 100 ft. from spillway crest)	Up to 20%

Source: Bucks County (1996: 16).

To preserve density, the overall intensity permitted is shifted to the unprotected portions of the site. These overall standards are part of the site capacity calculations required for most types of residential development.

Primary performance criteria

Three performance criteria are used to determine land use intensity: minimum open space, maximum density and maximum impervious surface. Each development district has its own land use intensity standards to reflect the character of the district, as shown in Table 2. The performance of each residential use in each district is measured with respect to the standards for minimum open space, maximum density and maximum impervious surface.

What do these standards measure? The open space ratio measures that portion of a site not occupied by private lots or dedicated rights-of-way and determines the impact of development on natural resources farming and aesthetics. The maximum density standard measures the number of dwelling units per acre and determines the impact of development on public services, the tax base, natural resources and aesthetics. Finally, the maximum impervious surface ratio measures that portion of a site covered by built form and determines the impact of development on ground and surface water, soil erosion and flooding.

With the natural resource protection and performance standards in hand, a developer can begin the site planing and design process. First, the natural resource areas must be mapped to determine the portion of the site that can be used for building. A site capacity analysis is completed to ensure the site-specific application of the natural resource protection and performance standards to the development (Bucks County, 1996: 1). This analysis will determine the amount of open space required—to protect natural resources and meet the minimum requirements of the development district—and the maximum number of units appropriate.

Fort Collins, Colorado

Fort Collins is located roughly 113 km (70 miles) north of Denver on the eastern foothills of the Front Range. The city is home to about 110,000 residents and forms the northern limit of the Front Range-Interstate 25 corridor that stretches south to include Boulder, Denver, Colorado Springs and Pueblo. This is one of the most rapidly growing areas in the United States.

Table 2:
Section 301 Table of Performance Standards. Bucks County

District	Use	Minimum Open Space Ratio	Maximum Density DU/Acre	Maximum Impervious Surface Ratio	Minimum Site Area	Minimum Lot Area
RP	A1-Single-family detached	–	0.44	0.10	2 acres	2 acres
	A2-Single-family cluster	0.75	0.24	0.05	10 acres	1 acre
RA	A1-Single-family detached	–	0.44	0.10	2 acres	2 acres
	A2-Single-family cluster	0.50	0.50	0.10	4 acres	30,000 sq. ft.
R1	A1-Single-family detached	–	0.87	0.11	1 acre	1 acre
	A2-Single-family cluster	0.50	0.90	0.10	4 acres	20,000 sq. ft.
SM	A1-Single-family detached	–	1.9	0.20	15,000 sq. ft.	15,000 sq. ft.
	A2-Single-family cluster	0.15	2.2	0.25	4 acres	10,000 sq. ft.
	A3-Performance subdivision	0.45	3.8	0.30	5 acres	–
SH	A1-Single-family detached	–	1.9	0.20	12,000 sq. ft.	12,000 sq. ft.
	A2-Single-family cluster	0.15	2.2	0.25	10 acres	10,000 sq. ft.
	A3-Performance subdivision	0.35	4.5	0.33	5 acres	–
UR	A1-Single-family detached	–	3.2	0.27	9,000 sq. ft.	9,000 sq. ft.
	A3-Performance subdivision	0.30	6.0	0.39	20,000 sq. ft.	–

In 1981, Fort Collins put in place the Land Development Guidance System (LDGS) for planned unit developments (PUDs). The purpose of the LDGS was to address the design, use, location, intensity and compatibility of new projects in a single review process. The approach applied to all PUDs with no minimum area requirements permitted any use as of right, and permitted PUDs in every zoning district (Porter et al., 1988: 161). The LDGS is based on the belief that the free market should dictate the locations and types of land use in the community. In fact, the Fort Collins planning scheme is the only municipality in this study that does not establish districts that constrain options for selecting land uses.

Review of a PUD application is subject to two types of criteria (numbered and lettered) intended to reflect community values regarding development.

- *Numbered criteria.* These are the absolute requirements each development must satisfy before approval may be granted. There are three categories of numbered criteria: community-wide, neighbourhood compatibility and engineering.

- *Lettered criteria.* These are the variable requirements for which a development must achieve a minimum percentage score. These criteria are designed to address public service requirements, site design and the external impacts of the development (Fort Collins, 1994: 8).

The specific criteria to be satisfied by a particular development depend on the land uses being proposed. The LDGS classifies all land uses into the following activities to determine which criteria are relevant.

A. All development
B. Neighbourhood service centre
C. Community/regional shopping centre
D. Auto-related and roadside commercial uses
E. Business service uses
F. Industrial uses
G. Extraction, salvage and junk yard uses
H. Residential uses
I. Downtown river corridor
J. Neighbourhood convenience shopping centre

Evaluation of a development application includes three steps.

Step 1—Performance against numbered criteria

The performance of the application is evaluated as either meeting the numbered criteria, not meeting the numbered criteria or the numbered criteria are not applicable. There are 34 numbered criteria. An application is automatically excluded from further consideration if it does not meet any of the numbered criteria, unless a variance is granted (Fort Collins, 1994: 8).

Step 2—Performance against lettered criteria

The application is evaluated against the lettered criteria associated with the use. A preliminary score is assigned to reflect whether the application:

- adequately implements the criterion (1 point assigned);
- more than adequately implements the criterion (2 points assigned); or
- fails to implement the criterion (0 points assigned).

The final score is then calculated based on a preassigned multiplier that reflects the relative importance of each lettered criterion to the other criteria. Each criterion is assigned a multiplier as follows:

5—Criterion is of exceptional importance
4—Criterion is very important
3—Criterion is important
2—Criterion of normal importance
1—Criterion of minor importance.

The points earned for each criterion represent the product of the score (how the application implements the criterion) and the multiplier (the relative importance of the criterion). The total

points earned are then divided by the total maximum points possible to determine the percentage earned by the application (Fort Collins, 1994: 9).

Step 3—density determination

The residential density for the proposal is determined. This is based on the locational attributes as indicated on a density chart. Each residential proposal must achieve at least the minimum percentage points required for the proposed density. Density is reduced if the minimum score is not reached, although there is an opportunity to earn credits.

Performance standards

The following represents the lettered criteria and density chart for Activity H: Residential uses. Note that criteria A to K determine the appropriate base density, and criteria L to W determine the appropriate density bonus.

The LDGS has resulted in an interesting mix of uses in some locations that would prove difficult to accomplish under traditional Euclidean zoning systems. In fact, most of the goals cited in 1981 when the system was implemented have largely been achieved; however, a movement at the political level and in the community for stronger

ACTIVITY H
Residential Uses (Fort Collins, 1994: 78)

DEFINITION
All residential uses. Uses would include single-family attached dwellings, townhomes, duplexes, mobile homes and multiple-family dwellings; group homes; boarding and rooming houses; fraternity and sorority houses; nursing homes; public and private schools; public and non-profit quasi-public recreational uses as a principal use; uses providing meeting places and places for public assembly with incidental office space; and child care centres.

CRITERIA
The following applicable criteria must be answered "yes" and implemented within the development plan.

1. DOES THE PROJECT EARN THE MINIMUM PERCENTAGE POINTS AS CALCULATED ON THE FOLLOWING DENSITY CHART FOR THE PROPOSED DENSITY OF THE RESIDENTIAL PROJECT? YES ☐ NO ☐ N/A
   The required earned credit for a residential project shall be based on the following:

60 percentage points = 6 or fewer dwelling units per acre
60-70 percentage points = 6-7 dwelling units per acre
70-80 percentage points = 7-8 dwelling units per acre
80-90 percentage points = 8-9 dwelling units per acre
90-100 percentage points = 9-10 dwelling units per acre
100 or more percentage points = 10 or more dwelling units per acre

2. DOES THE PROJECT EARN AT LEAST 40 PERCENTAGE POINTS AS CALCULATED ON THE FOLLOWING DENSITY CHART FROM BASE POINTS? YES ☐ NO ☐ N/A

DENSITY CHART FOR ACTIVITY H: RESIDENTIAL USES BASE POINTS

Criterion	Performance Standard	Maximum Credit	Earned Credit
A	Within 2,000 feet of an existing neighbourhood service centre; or a neighbourhood service centre to be constructed as part of the project. (If the project proposed is to be constructed in multiple phases, such neighbourhood service centre must be constructed as part of the phase for which approval is sought.)	20%	
B	Within 650 feet of an existing transit stop (applicable only to projects having density of at least six dwelling units per acre on a gross acreage basis).	20%	
C	Within 4,000 feet of an existing community/regional shopping centre, or a community/regional shopping centre to be constructed as part of the project. (If the project proposed is to be constructed in multiple phases, such community/regional shopping centre must be constructed as part of the phase for which approval is sought.)	10%	
	Within 3,500 feet of an existing neighbourhood or community park, or a community facility (except golf courses).	20%	
D	Within 3,500 feet of a publicly owned, but not developed, neighbourhood or community park, or community facility (except golf courses); or	10%	
	Within 3,500 feet of a publicly owned golf course, whether developed or not.	10%	

Criterion	Performance Standard	Maximum Credit	Earned Credit
E	Within 2,500 feet of an existing school, meeting all requirements of the State of Colorado compulsory education laws.	10%	
F	Within 3,000 feet of an existing major employment centre, or a major employment centre to be constructed as part of the project. (If the project proposed is to be constructed in multiple phases, such major employment centre must be constructed as part of the phase for which approval is sought.) No building, office or business park, or shopping centre which has served as the basis for claiming of credit under any of the BASE criteria of this density chart can also be used as the basis for claiming credit.	20%	
G	Within 1,000 feet of an existing child care centre, or a child care centre to be constructed as part of the project. (If the project proposed is to be constructed in multiple phases, such child care centre must be constructed as part of the phase for which approval is sought.)	5%	
H	Within North Fort Collins.	20%	
I	Within the Central Business District.	20%	
J	A project whose boundary is contiguous to existing urban development. Credit may be earned as follows: 0% for projects whose property boundary has 0-10% contiguity; 10-15% for projects whose property boundary has 10-20% contiguity; 15-20% for projects whose property boundary has 20-30% contiguity; 20-25% for projects whose property boundary has 30-40% contiguity; 25-30% for projects whose property boundary has 40-50% contiguity.	30%	
K	If the project contains dwelling units set aside for individuals earning 80% or less of the median income of city residents, as adjusted for family size, and paying less than 30% of their gross income for housing, including utilities (affordable dwelling units), calculate the percentage of affordable dwelling units in the project and enter that percentage, up to a maximum of 15%. (If the project is proposed to be constructed in multiple phases, the affordable dwelling units must be constructed as part of the phase for which approval is sought. In order to ensure that affordable dwelling units remain affordable for a period of not less than 25 years, the developer shall record such protective covenants as may be required by the City under Sec. 29-526(J)(4).	15%	

BONUS POINTS

Criterion	Performance Standard	Earned Credit
L	If it can be demonstrated that the project will reduce non-renewable energy usage either through the application of alternative energy systems or through committed energy conservation measures beyond those normally required by the City Code, a 5% bonus may be earned for every 5% reduction in energy use.	
M	Calculate a 1% bonus for every 50 acres included in the project.	

Criterion	Performance Standard	Earned Credit
N	Calculate the percentage of the total acres in the project that are devoted to recreational use. Enter one half of that percentage as a bonus.	
O	If the applicant commits to preserving permanent off-site open space that meets the City's minimum requirements, calculate the percentage of this open space acreage to the total development acreage and enter this percentage as a bonus.	
P	If part of the total development budget is to be spent on neighbourhood public transit facilities which are not required by City Code, enter a 2% bonus for every $100 per dwelling invested.	
Q	If part of the total development budget is to be spent on neighbourhood facilities which are not otherwise required by City Code, enter a 1% bonus for every $100 per dwelling invested.	
R	If the project contains dwelling units set aside for individuals earning 80% or less of the median income of city residents, as adjusted for family size, and paying less than 30% of their gross income for housing, including utilities (affordable dwelling units), calculate the percentage of affordable dwelling units to the total number of dwelling units in the project and enter that percentage, up to a maximum of 15%. (If the project is proposed to be constructed in multiple phases, the affordable dwelling units must be constructed as part of the phase for which approval is sought.) In order to ensure that affordable dwelling units remain affordable for a period of not less than 25 years, the developer shall record such protective covenants as may be required by the City under Sec. 29-526(J)(4).	
S	If a commitment is being made to develop a specified percentage of the total number of dwelling units for Type A and Type B handicapped housing as defined by the City of Fort Collins, calculate the bonus as follows: Type A $\frac{.5 \times \text{Type "A" Units}}{\text{Total Units}}$ In no case shall the combined bonus be greater than 30% Type B $\frac{1.0 \times \text{Type "B" Units}}{\text{Total Units}}$	

Criterion	Performance Standard	Earned Credit
T	If the site or adjacent property contains a historic building or place, a bonus may be earned for the following: 3% for preventing or mitigating outside influences adverse to its preservation (e.g., environmental, land use, aesthetic, economic and social factors); 3% for assuring that new structures will be in keeping with the character of the building or place, while avoiding total units; and 3% for proposing adaptive use of the building or place that will lead to its continuance, preservation and improvement in an appropriate manner.	
U	If a portion or all of the required parking in the multiple family project is provided underground, within the building, or in an elevated parking structure as an accessory use to the primary structure, a bonus may be earned as follows: 9% for providing 75% or more of the parking in a structure; 6% for providing 50-74% of the parking in a structure; 3% for providing 25-49% of the parking in a structure.	
V	If a commitment is being made to provide approved automatic fire extinguishing systems for the dwelling units, enter a bonus of 10%.	
W	If the applicant commits to providing adequate, safe and convenient pedestrian and bicycle connections between the project and any of the destination points described below, calculate the bonus as follows: 5% for connecting to the nearest existing city sidewalk and bicycle pathlane; 5% for connecting to any existing public school, park and transit stop within the distances as defined in this density chart; 5% for connecting to an existing city bicycle trail which is adjacent to or traverses the project.	

control over growth has resulted in significant changes in Fort Collins. The city has recently done away with the LDGS by adopting a new plan.

Largo, Florida

Largo is located on Florida's Gulf Coast and is part of a larger urban area that includes the cities of Clearwater and St. Petersburg. The population of Largo is approximately 65,000. While the city supports some tourist activity, most travellers head for the nearby resort beach communities of Indian Rocks, Redington Beach and Madeira Beach.

The City of Largo adopted its Comprehensive Development Code in 1983. This ordinance applies performance standards to protect residents from the potential adverse impacts of development. These standards effectively control the type, distribution and intensity of development in the city.

The employment of professional planning staff in the mid-1970s is cited as one of the main reasons this Code was adopted. Staff recognized the importance of streamlining the regulatory process and ensuring consistent review in effectively handling the high levels of growth that occurred at the time. In so doing, the Code includes a larger number of uses in each category, the measurement of density by units per acre rather than by housing type, and the control of site use through impervious surface and floor/area ratios rather than setbacks, height limits and minimum lot dimensions (Porter et al., 1988: 185). More zoning decisions were also shifted to administrative review from legislative review.

Under the current scheme, Largo is divided into three general use districts that define specific areas of the city and require different standards of development. These standards reflect the different circumstances within each district. The general districts include:

- *Management district.* Makes up the majority of land in the city and all uses are permitted, provided they meet the standards of the Code.
- *Redevelopment district.* Intended to encourage redevelopment and revitalization efforts to complement the mixed-use character of the area.
- *Downtown district.* Intended to protect the area from incompatible uses and to promote a high-intensity, mixed-use area (Largo, 1993: 4001).

In addition to the general districts, 14 specific-use categories are designated by the Code. These categories consist of uses with similar impacts, such as traffic generation, intensity, noise, glare and odour. The use category and the district in which the parcel is located provide the basis for determining the impacts of a development proposal. They also determine the class of development.

The classification of development is determined by the relationship between the use category of a proposed development and the use designation of the proposed site. A proposal is then classified as one of three developments.

- *Class 1* developments propose a use that is consistent with the underlying use designation. They are permitted by right, provided they meet the applicable performance standards.
- *Class 2* developments propose a use (or portion thereof) that is inconsistent with the underlying use designation. These developments are permitted in any district, provided the impacts do not exceed those expected to result from a Class 1 development on the same site. Compliance with the applicable performance standards is also required.
- *Class 3* developments are prohibited, such as industrial uses in the redevelopment and downtown districts (Largo, 1993: 4114).

Performance standards are used in the Largo planning scheme to protect neighbouring properties and land in adjoining jurisdictions from the adverse impacts of a proposed use. These standards apply to allowable use categories in each district and regulate lot size, building placement and bulk, dwelling unit type, floor area ratio, impervious surface ratios, accessory uses, potential nuisance, environmental and aesthetic impacts, and impacts to public facilities and services. Excerpts from the Code for key standards are outlined here.

Excerpts of the residential performance standards for density and lot area are provided here.

Subsection 5101. General Residential Uses

...

(B) Standards: The development of any residential use shall be permitted only in full compliance with the following standards...

(2) Density

(a) **Maximum allowable density:** Maximum allowable density of dwelling units shall be that stated in the Future Land Use Element of the Comprehensive Plan, unless the proposed residential use is eligible for density increases...but shall in no case exceed 15 dwelling units per acre, except as provided in subsections 5106 (Affordable Housing Developments) and 8002 (Development Rights). Maximum allowable density therein shall be determined by the adopted level of service (LOS) for public facilities contained in the Comprehensive Plan...

(3) Lot Area

Minimum lot area standards are established for all residential development and redevelopment, including residential in-fill....The specific intent of these lot area standards is to ensure that new development will not exceed the maximum residential density designated for the underlying land regardless of the district in which the land is located.

(a) Unless otherwise specified in this Code, minimum lot areas, including standards for residential in-fill and replats which do not include dedication of additional public right-of-way, are shown in the following matrix.

MINIMUM LOT SIZES

Land Use Designation	Dwelling Type Single-Family
Residential/estate (max. 1.0 unit/acre)	43,560 sq. ft.
Residential Suburban (max. 2.5 units/acre)	17,424 sq. ft.
Residential low (max. 5.0 units/acre)	8,712 sq. ft.
Residential urban (max. 7.5 units/acre)	5,808 sq. ft.
Residential low medium (max. 10.0 units/acre)	5,000 sq. ft.
Residential medium (max. 15.0 units/acre)	5,000 sq. ft.

...

Excerpts of the impervious surface standards are provided here.

Subsection 5801. Purpose
Impervious surface is a measure of use intensity....Allowable impervious surface is greatest in the downtown and redevelopment districts, where more intense development is permissible and encouraged, than in the management district.

Subsection 5802. Calculation of impervious surface ratio (ISR)
The maximum allowable impervious surface coverage, or that portion of the site which may be covered by building, peving or other impervious materials, is expressed as a ratio. This ratio is calculated by dividing the total impervious surface area by the gross area of the site.

Subsection 5803. Standards
The table below shows the maximum ISR for each land use designation by district...the land use designations (excluding water drainage features) are arranged in order of increased intensity and overall impacts from top to bottom. The districts are likewise arranged from left to right.

(1) Maximum allowable ISRs for residential developments shall be determined for an entire project. Individual platted lots are exempt from the standards for residential uses.

(2) Maximum allowable ISRs for non-residential land uses in both residential and non-residential land use categories shall be determined on a case-by-case basis and shall depend on the following factors:

(a) intensity of the proposed use;
(b) underlying site conditions;
(c) relationship of the proposed use to surrounding existing uses; and
(d) availability of public facilities and services to accommodate the project.

MAXIMUM ALLOWABLE IMPERVIOUS SURFACE RATIO (ISR) TABLE

	District		
Land Use Category	**Management**	**Redevelopment**	**Downtown**
Preservation	0.10	0.20	0.20
Recreation/open space	0.40	0.50	0.60
Residential estate	0.40	--	--
Residential suburban	0.40	--	--
Residential low	0.45	0.55	0.65
Residential urban	0.45	0.55	0.65
Residential low medium	0.55	0.65	0.75
Residential medium	0.55	0.65	0.75
Residential/office general	0.55	0.65	0.75
Institutional	0.65	0.75	0.85
Industrial limited	0.65	0.75	0.85
Commercial general	0.70	0.80	0.90
Transportation/utility	0.70	0.80	0.90
Industrial general	0.70	--	--
Water drainage feature	Underlying use	Underlying use	Underlying use

...

Excerpts of the natural resource protection standards are provided here.

Subsection 5404. Purpose
The purpose of this subsection is to provide regulations for the control of stormwater discharge as it affects abutting property, rights-of-way, drainage facilities and prevention of soil erosion.

(B) Criteria for calculating stormwater runoff

(1) **Rational formula:** The rational method of analysis shall be used in the design of stormwater systems, and shall be the basis for determining size or storage area...

Rational formula is Q = CIA

In which Q = Runoff in cubic feet per second
I = Intensity of rainfall in inches per hour
A = Drainage area, expressed in acres
C = Coefficient of runoff

(2) Rainfall intensity shall be based on the 25-year storm unless it is determined by the Engineering Services Division of the Public Works Department that more stringent requirements are necessary.

(3) Values for the coefficient of runoff (C) shall be composite subject to the approval of the city engineer and based on the following:

Character of Surface Pavement	Runoff Coefficients
Asphalt pavements	0.95
Concrete pavements	0.90
Brick pavements	0.85
Pervious concrete and turf block (depending on size of opening)	0.50
Roof	0.95
Poorly drained soils with vegetation	
Slope—Flat < 2 %	0.13 to 0.17
Average 2% to 7 %	0.10 to 0.22
Steep > 7 %	0.25 to 0.35
Well-drained soils	
Slope – Flat < 2 %	0.05 to 0.10
Average 2% to 7 %	0.10 to 0.15
Steep > 7 %	0.15 to 0.20

...

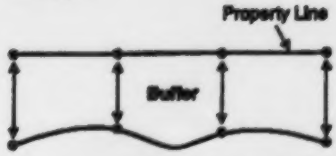
Excerpts of the natural resource protection standards are provided here.

Subsection 5501. Purpose
Requirements are set forth in this section for the provision of buffers between certain adjacent land uses to ameliorate nuisances between those land uses or between land use and a public road. The separation of land uses is intended to eliminate or minimize potential nuisances, such as dirt, litter, noise, light and glare, unsightly buildings, signs or parking areas...

Subsection 5502. General standards
(A) Location and width: Buffers shall be located on the outer perimeter of a lot or parcel, extending to the lot or parcel boundary line, or between differing land uses on a single parcel, but may not occupy any portion of an existing, dedicated or reserved public or private street, or right-of-way.

Buffer width is normally measured from the property line, but design variations are allowed. Average width shall be measured at the two end points of the buffer and two additional points which are each approximately one third of the total linear distance from the end points. The average width of the buffer shall be that shown in the detailed standards and illustrations...

Example:



Take measurements between the points.

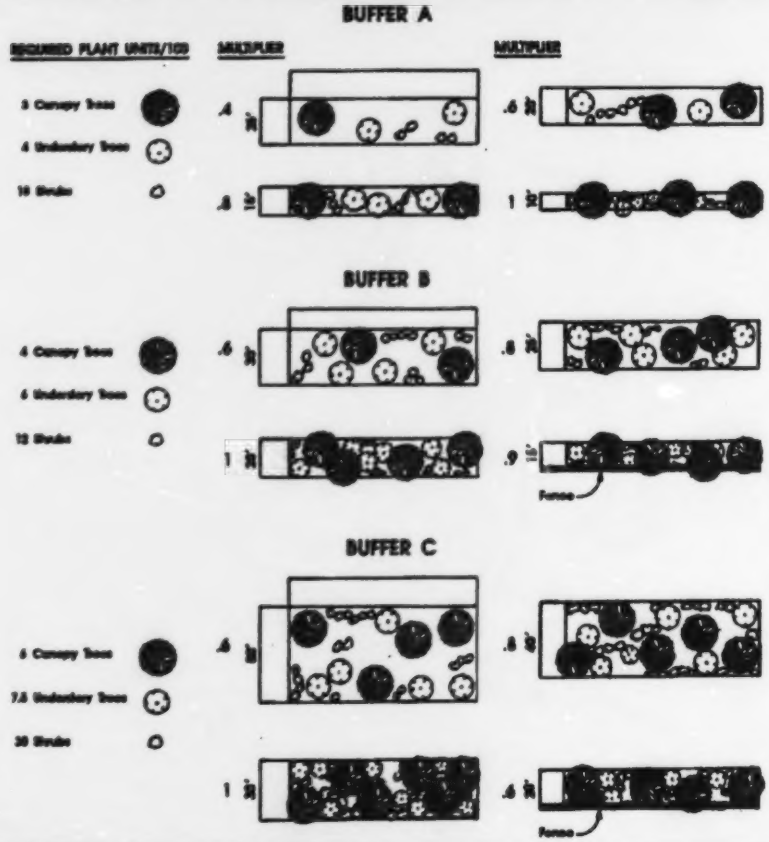
...

(D) **Table of buffer requirements:** Requirements for buffers are based on the intensity of the proposed development or use, and the uses which are developed or designated on all adjacent properties. A table of required buffers for each land use district follows. The letters A, B and C refer to specific buffer widths, typical examples of which are illustrated...; D means required buffer widths shall be determined by the development controls officer; N means no buffer required. The buffer requirement is found by locating the proposed use in the left-hand column.... Each adjacent land use (or designated land use) is identified across the top. Where the row for the proposed use intersects the column for a specified land use, the letter identifying the required buffer in given.

As the management district makes up the majority of land in the city and permits all uses, the buffer requirements for this district are presented here.

...

(3) Landscaping requirements under this Code may be met by providing any one of the buffers shown under a specified type (A, B, C, D or N). The minimum amount of landscaping required in each for buffers A, B and C is indicated in the table of illustrative buffers below and is expressed as required plants per 100 linear feet of buffer length. The numbers in the "multiplier" column are used to adjust the number of plants required when the buffer width is either increased or decreased.



5. INSIGHTS INTO PERFORMANCE-BASED PLANNING

This study of international experiences in the use of performance-based planning is rich in insights provided by 26 expert informants. These insights are important to our understanding of the key considerations in implementing such an approach, possibly here in Canada. There are four such considerations including:

- contextual elements;
- designing the approach;
- marketing the approach; and
- implementation outcomes.

While this is an abridged look at these considerations, coverage is more detailed in the full study report.

Contextual Elements

There are several contextual elements that can be attributed to a move toward the use of performance-based planning in the jurisdictions studied. These contexts are important in considering the use of this approach here in Canada. While many of these elements have to do with weaknesses identified in an existing system, many others represent external, societal demands for change. There are four such elements.

The need for higher density development

Renewed interest in higher density development is a worldwide phenomenon. The New Urbanism movement is garnering international recognition as a means of addressing many urban ills, a trend that is readily apparent in the study jurisdictions. In Australia, the push for higher density housing was largely a response to concerns "that Australia was in a sense running out of subdividable land...coupled with this was the realization that the cost of new development on the fringe was very high."[1] The answer to fringe development was higher density development with the belief "...that increasing densities in existing areas [would] reduce the amount of growth and the demand for new infrastructure in the outer areas."[2] By replacing the existing prescriptive approach to land use planning with a more flexible, performance-based one, the government believed the development industry could achieve "...higher levels of density with acceptable urban design outcomes."[3]

In New Zealand, massive immigration brought with it international perspectives and a desire to live at higher densities. These immigrants had no need for the conventional large lot single-family house, and as a result "...they influenced a whole rise in higher density apartment-style living...which wasn't evidenced by the local population."[4] The development industry recognized the need to replace the existing prescriptive approach which would have generally restricted and inhibited its response to this challenging market.

Finally in the United States, the agendas for performance-based planning are mixed, but generally stress environmental values. These values are exhibited in the adoption of growth management agendas and are reflective of a shift in social attitude, a "concern with the quality of life and the type of growth that is occurring...."[5] And, while residents express "community character concerns," municipalities try to deal with infrastructure efficiency as it relates to the land use pattern.[6] As in Australia and New Zealand, jurisdictions in the United States emphasize land use and design compatibility as a solution to the conflict between existing residents and new higher density development.

The need for flexibility and predictability

Conventional thinking suggests that a compromise between flexibility and predictability exists in every planning system. This compromise is recognized and accepted both by developers and municipalities. Or is it? It turns out that the nature of this compromise differs with perception. For instance, the old town and country planning approach in Australia relied on the rigid

application of arbitrary use categories, but offered very little control over development standards. The result was an unpredictable process (frequent use amendments were necessary) with flexibility on the site (development standards were loose). Under the new performance-based approach, predictability is reintroduced through the use of clear and defensible standards, but more control over development standards means less flexibility. In short, developers appreciate the clarification of use control (increased predictability) but dislike the new controls over development standards (decreased flexibility).

In the United States, it appears the opposite is true. Under conventional zoning, there is rigid control over both land use and development standards. And while this approach has always provided some flexibility through rezoning, it has become a costly and unpredictable process. In an attempt to break out of this system of rigid regulation and frequent amendments, the performance-based approach is often considered as a means of improving both flexibility and predictability through the use of clearly defined and defensible standards. However, increased flexibility comes at a cost: staff discretion in interpretation and evaluation. In short, developers appreciate the clarification of use control (increased flexibility) but dislike the expanded municipal role in application review (decreased predictability).

The differences between these two conventional approaches are significant in explaining the differing perceptions regarding flexibility and predictability. As an alternative approach, performance-based planning in Australia actually provides greater predictability but less flexibility. In the United States, on the other hand, it provides greater flexibility but erodes predictability. In any case, flexibility is required for developers to better respond to the market and for municipalities to encourage desirable development. However, it is vital that this flexibility be accompanied by predictability. As such, the planning system must be both transparent (predictable process) and reasonable (predictable outcome).

The need for consistency and transparency

Consistency and transparency of process are key contextual elements in the push for performance-based planning. In Australia, there was pressure by the development industry "to introduce some consistency in terms of assessment...to give the developers some consistency in the way in which their projects were assessed."[7] The industry also feared political interference and staff arbitrariness. Developers believed that "professional staff needed a more rational set of design criteria to support professional decisions against the pressure of elected members with fixed mind sets."[8] The introduction of performance-based planning marked "the first serious effort at getting commonality and consistency and a higher general benchmark across local government..." in Australia.[9]

In New Zealand, developers appreciate the emphasis on reason offered by the performance-based approach. "For once in your life you can actually see the context within which these decisions are being made and it has been told to you."[10] However, since the implementation of the *Resource Management Act*—the federal legislation that promoted the use of performance-based planning—is open to interpretation by local and regional authorities, both consistency and transparency may be hindered by the regulator's interpretation and bias.

In the United States, the original performance-based planning goals of consistency and transparency have apparently not transpired. One developer described the approach as "...rather a black box" due to its complexity and lack of transparency.[11] This may not have been the case early on, but performance-based planning has acquired some notoriety among developers in the United States. What appears to irk the development industry most is the perception of a hidden agenda and biases of the municipalities that apply the approach. Developers see an implicit anti-urban bias in the performance approach that favours lower density development, or at least a lower density "look." This is not surprising considering developer "buy-in" is

probably the greatest challenge to performance-based planning in the United States.

The need for a streamlined planning process

Developers in all three countries complained that the conventional planning systems were too complex, cumbersome and time consuming. Of course, a move from the conventional toward the alternative in the reform of any planning process is done under the rubric of streamlining and simplification. In Australia, all levels of government were sensitive to the demands of the development industry for streamlining planning and simplifying controls. Existing ordinances were becoming increasingly complex as more detailed controls were added. In New Zealand, performance-based planning was seen as the best way to streamline the resource consent process by "narrowing it down to the particular environmental effect that you are concerned about... instead of addressing absolutely everything."[12] In the United States, streamlining was certainly a procedural goal, although there was some ambivalence about performance-based planning being any better than the conventional approach.

Designing the Approach

There are several insights into the design of a performance-based planning approach. The careful consideration of various alternatives in the design of such an approach can ease implementation and ensure desired outcomes. Three key design insights are outlined here.

Clarity and compatibility of goals

Although it seems obvious—that the identification of goals is key in the design of any planning tool—every one of the study informants mentioned the importance of goals in the design of a performance-based planning system. The clarity of the goals is vital in designing the approach to achieve the desired outcomes and in ensuring the support of key stakeholders, such as the development industry, professional bodies and the public. The goals must also be compatible, particularly where more than one level of government is involved. For instance, Australia had compatible goals at all levels: sustainable growth for the federal government, administrative consistency for the states and higher density development and fairer inter-municipal competition for the municipalities. New Zealand's ambiguous national agenda of pro-environment and pro-business resulted in confusion at the local level. In the United States, the goals were local only. In any case, the goals of senior levels of government must be compatible with local goals. This will be a key consideration in Canada.

Scope and applicability

It is worth noting that performance-based planning occurs in many forms. With respect to scope, the initial focus of performance-based planning in Australia was medium-density housing in urban areas, later expanded to include all housing types in all areas. In New Zealand and the United States, the application of performance-based planning affects all land use. The narrower scope of performance-based planning in Australia has been credited for making the approach more acceptable and easier to implement.

With respect to applicability, there are differences as well. In Australia, AMCORD and its derivatives offer a choice to developers between a conventional solution and a performance-based one. In New Zealand and the United States, the performance-based approach replaces the old system in its entirety and offers no choice. Replacement or overlay? Several informants from both New Zealand and the United States suggested that a parallel or overlay approach be used instead of outright system replacement so developers not wishing to work under performance-based control can use conventional zoning.

The right tool for the job

Although the performance-based approach is used in a variety of ways to achieve a variety of planning goals, there may be other more appropriate tools in some cases. For instance,

in Australia, both the federal and state governments wanted a consistent planning regime across jurisdictions. Although performance-based planning was not necessary in the pursuit of administrative consistency, it was ideal for ensuring principled flexibility in pursuit of urban consolidation.

Affordable housing is another case in point. It is possible to provide opportunities for more affordable housing through direct public investment or increased building density without using a performance-based approach. The contribution of performance-based planning to housing affordability is generally indirect. First, the flexibility it provides can improve housing choice, which, in turn, may improve housing affordability. Second, the principled approach of performance-based planning to resolving conflicts between developers and residents can make higher density projects more acceptable to residents. Finally, the emphasis of the approach on design can make higher density housing more appealing to both consumers and existing residents.

Marketing the Approach

A poorly marketed approach is doomed to fail. Every informant stressed the importance of taking a leadership role in marketing performance-based planning. The following three insights are key to marketing this approach successfully.

Facilitation

The importance of facilitation in the marketing of performance-based planning is best expressed by comparing successes and failures. In Australia, the federal government used affordable housing as a unifying goal: something that no one could disagree with. The federal government used a minimum of program funding to maximum advantage. How? It invested it to gain access to the state/territory governments' planning bureaucracies. It undertook vital research useful to municipalities in court challenges. It gained professional favour by having experts do the necessary research. Simply put, the key to success in Australia was federal government sensitivity and commitment to partnering with the state/territory governments.

In New Zealand, the national government did not take an active role in marketing performance-based planning—perhaps a reflection of its "hands off" philosophy. Although it did emphasize the importance of partnerships between regional and municipal governments, this has not worked well since the environmental bias of regional governments does not support municipal government competition for development.

Leadership

Strong leadership is vital to the successful marketing of performance-based planning. In Australia, the federal government was the most influential leader, although more progressive states (Victoria) and cities (Melbourne) also took active roles. In New Zealand, municipal governments were very aggressive, such as Waitakere City's eco-city plan to distinguish it from neighbouring municipalities. In the United States, individual champions were significant, such as Lane Kendig.

However, leadership and the motivation of professional planners are seen as vital in all three countries. Planners can make or break a performance-based scheme. In Armidale, Australia, staff leadership was largely responsible for the adoption of a performance-based code. In Melbourne, Australia, an unexpected political crisis distracted municipal politicians long enough to allow planning staff to hasten the implementation of such a code. In Waitakere City, political and staff leadership pushed through New Zealand's first eco-city plan. In the United States on the other hand, one informant noted cases of non-cooperation and even sabotage of a move toward alternative regulatory approaches.

Stakeholders

A broad-based, consensus-building approach at the federal level was very successful in Australia.

At the local level, there was municipal emphasis on the shared values of "pro-good development." A municipality must be pro-development to sympathize with developer needs and pro-good development to be sensitive to resident concerns. As a result, stakeholder involvement at the local level ensured a performance-based approach that satisfied the needs and concerns of all involved.

In New Zealand, local government promoted performance-based planning as a strategic alternative offering a better balance between environment and development. In this case, as in Australia, both developers and residents got what they wanted. In the United States, the emphasis was on process: one that stressed community vision and conflict resolution. In all three countries, there was a recognition that the real users of a performance-based approach are the advisers and consultants working on behalf of developers. As a result, their buy-in is critical.

Implementation Outcomes

The following are insights into the actual outcomes of implementing a performance-based planning approach in the study jurisdictions. These insights are useful in understanding how the outcomes differ from the intended goals of the approach.

Flexibility and predictability revisited

In Australia, performance-based planning has improved predictability due to the clear focus, measurable performance criteria and reasoned explanations under AMCORD. However, the approach has not increased flexibility, at least not on all fronts. Under the previous planning system, there was strict land use control, but loose development standards. Under AMCORD, developers like the flexibility in land use, but dislike stricter controls on development standards. In the United States, there is a feeling that performance-based planning has eroded predictability. In fact, some developers compare the approach with the planned unit development (PUD) process: both provide flexibility but have become too complex.

Consistency and transparency revisited

Depending on the informant, performance-based planning is either a success or a failure. For instance, in Australia there is greater consistency now than there was under the old town and country planning system. However, spotty take-up of the approach in smaller and less advanced municipalities has both neighbouring jurisdictions and developers demanding greater conformity. In other words, consistency means all jurisdictions should use performance-based planning.

By contrast, very few municipalities in the United States use performance-based planning. As such, consistency would demand the elimination of this approach in favour of conventional zoning used virtually everywhere—at least according to the developers who do not like it. In New Zealand, unclear national agendas and variation among municipalities has resulted in the inconsistent application of performance-based planning and confusion among developers. In fact, some New Zealand developer informants actually envy Australia's AMCORD for its consistency across jurisdictions. The problem in New Zealand is that too much is left to locally determined criteria and standards.

Transparency, or the lack of it, is cited by developers as the most significant concern with performance-based planning. And, although this approach is touted as a means of removing political influence, it has lead to increased staff judgment and discretion. Staff decisions can always be appealed, of course, but by then the harm is already done.

There can be systematic staff biases. For instance, developers note a lack of cost consciousness among planning staff in Australia who often apply the performance provisions selectively to promote or restrict development. In New Zealand, there may be a bias toward lower density residential development and away from commercial and industrial projects. Also cited is an inclination to emphasize the adverse impacts of development without considering the benefits. In the United

States, some developers note an anti-urban, anti-development and anti-community bias.

Streamlining revisited

There is evidence in all three countries that performance-based planning has become more bureaucratic, complex and cumbersome than when first introduced. In Australia, there have been more site-specific appeals; however, the problem appears to be more severe in New Zealand and the United States. Codes have become voluminous with many cross-references; developers complain that it is difficult "to get to the point." The result is that performance-based planning has become more time consuming and costly.

Unexpected consequences

There are other unexpected outcomes to the implementation of this approach. Some are positive and some are not. While the impact of AMCORD on housing affordability is not yet known, it has helped to improve housing choice and quality of higher density housing. In fact, increased demand for medium-density housing coupled with renewed interest in downtown living has resulted in reduced affordability in major centres such as Melbourne. Of course, urban consolidation was the goal behind AMCORD. In New Zealand, performance-based planning has increased options for developers that may lead to greater affordability. Further, developers noted that new notification procedures actually bring neighbours and developers together to resolve their differences before approval, thus avoiding lengthy appeals. This is a significant unexpected outcome.

6. LESSONS FOR THE USE OF PERFORMANCE-BASED PLANNING IN CANADA

This chapter shifts the international insights in Chapter 5 to the Canadian context in order to inform discussion on the possible application of performance-based planning here. By considering international experiences, it is possible to speculate on whether performance-based planning could be adopted in Canada, and if so, how it could be designed and promoted.

The Australians Seem to Have It Right

Australia has a tradition of British-style town and country planning whereby a landowner must seek the right to develop his or her property. Today, performance-based planning in Australia offers the opposite: flexibility in land use but rigidity in development standards. Performance-based planning also provides a more predictable process. In the United States, there has always been the constitutional guarantee of private property rights. Here, performance-based planning offers more flexibility in land use than does conventional zoning, while rigidity in development standards remains. The process under the performance approach has become unpredictable.

This dichotomy is important for one reason: while Canada and Australia share a striking resemblance in constitutional structure, Canada's planning system has much more in common with that of the United States, where performance-based planning is not exactly an unqualified success. Canadian developers and municipalities have been weaned on zoning, and while both are aware of the problems, both have devised ways of dealing with them. And, while many involved in planning and development complain about zoning, few are willing to try something different.

However, there are characteristics unique to Canada that may favour a well-designed and administered performance-based planning system. First, planning in Canada generally garners greater respect from both the development industry and the general public. Second, there is a greater legislative tradition and institutional infrastructure in support of planning. Third, there is a stronger, more explicit connection between planning and development control. Finally, there is greater consistency across municipalities, if not across provinces in the application of planning and land use controls. These unique characteristics permit the serious consideration of the Australian experience with performance-based planning. From a federal viewpoint, a top-down voluntary approach focussing on a key land use that is sensitive to intergovernmental relationships and is responsive to the needs of both the industry and the community, is a recipe for success.

Goals Should Be Compatible

Any move toward a performance-based planning approach in Canada would necessarily result in senior government involvement since each province already has planning legislation in place. While different levels of government will have different goals, these goals must be compatible. For instance, in Australia the federal government's goal of sustainable development was not incompatible with that of administrative consistency at the state/territory level. It was also not incompatible with the municipal level desire to maintain population through higher density residential development. Sustainable development was a very general goal and could have been pursued in many ways, but the choice of medium-density housing as a focus within sustainability worked brilliantly. On the other hand, the incompatibility of deregulation and environmental protection as national goals in New Zealand sent mixed messages. This incompatibility at the national level lead to interpretation and inconsistent implementation at the municipal level, much to the chagrin of neighbouring municipalities and the development industry.

In Canada, it seems that the goal of housing affordability through higher density development

is shared by all levels of government, as well as the development industry. In short, the compatibility of goals between all levels of government involved appears necessary for the successful implementation of performance-based planning.

Is Performance-Based Planning Necessary?

Would it be possible to amend existing zoning to incorporate performance considerations? Existing zoning is, after all, based on certain assumptions of performance, although changes in economic conditions, social attitudes and technology often render these assumptions inadequate, if not inappropriate. But, if the goal is housing affordability, why not create zoning by-laws that reflect these performance assumptions? Must everyone be forced to adjust to a new planning approach? The lesson here is twofold. First, a performance-based approach is not necessarily the only way to achieve a planning goal. Second, even if it is the most appropriate method, it should not crowd out other equally appropriate ones. Since change can be costly and create resistance, it is important to minimize the costs associated with change by focussing on the essentials and by providing a choice between conventional and alternative approaches.

Don't Let the Means Drive the End

The advantage of Australia's AMCORD is its focus on outcomes rather than process. In New Zealand and the United States, municipalities see performance-based planning as a panacea, an all-purpose tool. As a result, performance-based schemes in these jurisdictions tend to include all land uses and pursue a multitude of agendas. In time, these schemes have become too complex by trying to address every use and condition. They have also become arbitrary, using performance criteria that are not easily defined or measured.

Recognize the Psychology of Change

Fort Collins provides an interesting lesson here. The city has used performance-based planning since the late 1970s, in which time the city's population has doubled. As a result, most residents are only familiar with a performance-based approach, but now they want something different. A new city plan adopting a stricter New Urbanist vision was approved late in 1997.

There are three key points here. First, people can grow tired of even a good thing, particularly as collective memory fades after a long period of status quo. Second, a win-win scenario for local residents and developers is necessary for innovation. If a win-lose scenario becomes the result of innovation, it constitutes a threat and will fail. Finally, a significant event can be a catalyst for change. For instance, a controversial deal between the City of Fort Collins and a developer enraged local residents who blamed the planning system. This was a key factor in an overhaul of the planning system in Fort Collins. While it is important to recognize the psychology of change and exploit catalytic events, change for change sake must be avoided.

Government as Promoter

Since planning is a government function, the promotion of a performance-based approach lies with government. In fact, developers must often be convinced of the utility of performance-based planning. If adoption of the performance-based approach is voluntary, then municipalities must also be convinced of its utility. At this time, developers in North America generally associate performance-based planning with an environmental agenda that is not altogether pro-development.

Senior governments may impose (New Zealand) or induce (Australia). The success of Australia's AMCORD suggests a soft sell approach of federal–provincial partnership and co-ownership. This should be accompanied by solid funding for credible and practical research for both municipalities and developers. While municipal governments can always impose regulatory mechanisms, securing buy-in from developers is always a challenge. Developers can always take their business elsewhere. As a result, it is vital

to consider the bottom-line mindset of developers by minimizing the time and cost of securing approval. Developers are willing to pay for things that add value to their proposal, but most are unwilling to pay for things that add nothing.

Flexibility and Predictability... a Red Herring?

The inherent compromise of flexibility and predictability is recognized and accepted by the development industry. Since developers need to make a profit, they need predictability as a rule and flexibility as a bonus. A developer who wants a project that deviates from any norm (land use, density, design) will spend more time and money if the potential benefit justifies the investment.

Under conventional zoning, flexibility is achieved through the amendment process, which is costly and unpredictable due to public input and political intervention. And while risk taking is part of doing business, the goal of developers is to reduce costs and increase the odds. Performance-based planning can provide flexibility within a more predictable process that explicitly states the decision criteria. The risk is more up front and the costs upstream. The lesson here is while performance-based planning may not offer more flexibility than conventional zoning, it offers flexibility through a process that is transparent, with clear principles and defined standards.

It is certainly worth comparing the international views of the development industry regarding performance-based planning. In North America, conventional wisdom is that while zoning may be rigid, it is more predictable than the performance approach, except in amendment or appeal. The North American reasoning is based on "what exists is good." On the other hand, Australian reasoning is based on "what exists is bad." The conventional wisdom here is that amendments and appeals are too unpredictable and the consequence of a rigid and arbitrary code. In Australia, performance-based planning is more predictable and transparent since unprincipled amendments and arbitrary decisions are replaced by predetermined, articulated performance criteria. The lesson is that both performance-based planning and conventional zoning have merits and shortcomings that actually complement each other. The strength of conventional zoning lies in the predictability of outcome in routine cases. The strength of the performance approach lies in the predictability and transparency of process for non-routine and innovative cases.

Complexity Is the Real Enemy

A developer willing to pay for flexibility is not a developer willing to pay for a complex process. The track record of performance-based planning is not great. Over time, this approach can become politicized and bureaucratized, making it cumbersome, time consuming and complex. The lesson is to limit the scope of a performance-based approach to a few clearly articulated goals (such as environmental protection and design compatibility), focus on a few key land uses (such as medium-density housing) and give developers the right to choose between a conventional zoning solution and the performance-based alternative.

Consistency Is the Real Goal

Developers want a consistent planning process so they can be treated equally and compete fairly no matter where they go. Governments also want consistency. Municipal governments need it to compete effectively with rival municipalities for growth. The demand for a consistent planning process plays itself out very differently depending on the context.

For instance, in Australia developers demand that all municipalities take up a performance-based approach. In Largo, Florida, developers ask why the city uses a performance-based approach when other municipalities do not. It would appear that when only a few municipalities use performance-based planning, the developers find it a nuisance. On the other hand, when many municipalities use the approach, developers all want to use it. In the end, the only real concern of developers is consistency, whatever the regulatory regime. This makes innovation very difficult and demands serious commitment.

Common Ground Is the Key to Success

The compatibility of goals—whether between different levels of government, between governments and developers, or between developers and residents—is the key to success. This suggests that the best-case scenario for performance-based planning is its introduction during a period of high growth by a pro-growth government. During a high-growth period, there is generally greater latitude for the development industry to innovate, particularly with good design. However, during a climate of growth, there is often greater pressure, particularly from environmental interests, on governments to manage growth.

A pro-growth government can better accommodate this pressure without being inconsiderate, or at least appearing to be considerate, to development interests. Thus, a growth climate provides the conditions for innovation, and a pro-growth government provides the energy and the safeguards to introduce appropriate innovation.

People Can Work Together

There is sufficient evidence to suggest that diverse—and even antagonistic—groups can work together. Broad-based consultation can be both helpful and harmful. It can build consensus or it can allow vocal and resourceful groups to hijack the process. In Australia, the government used a powerful steering group to oversee the design and promotion of AMCORD. It invited all parties, all states/territories and all sectors to participate and help channel negative energy into productive participation. Many municipalities using a performance-based approach involved critics and objectors early on, inviting them to participate in the design of the scheme and incorporating their ideas. The key is to get maximum participation at the design stage. This helps to reduce conflicts and challenges down the road.

Economic Incentives Seem Less Important

If given a choice between performance-based planning and conventional zoning, developers will choose the method that most appropriately meets their needs; however, economic incentives appear to be a less important consideration in their bottom-line calculation. A developer's first consideration is location, regardless of whether that location has a conventional or performance-based planning regime. The second consideration is time and cost in securing approval. If performance-based planning can reduce this time and cost, then it is incentive enough to use it.

Conventional zoning has the advantage of being the standard approach, and most straightforward proposals can be handled quite quickly using this method. Generally, developers will only consider a performance-based approach when a proposal deviates from the norm. Developers must also be convinced of the utility of this method. The lesson is that performance-based planning should be used as an alternative to address non-standard, innovative proposals. The bulk of development applications should be dealt with using conventional zoning.

The Final Analysis

Since change is costly and contentious, particularly with respect to planning, it is important to consider the status quo as well. If change is necessary, can existing instruments be used to achieve change? If not, are alternative instruments appropriate in pursuing change? This study found that performance-based planning should not replace an existing conventional zoning system, but complement it in the processing of certain more innovative developments.

In any case, the implementation of performance-based planning requires a long-term commitment to champion the approach. Performance-based planning can be a powerful tool, but its success

relies on careful design, marketing and administration of the approach. Consider the following.

In designing the approach

- Make it simple...just a few goals and a few topics.
- Make it straightforward...use easily defined and measurable criteria as much as possible.
- Make it transparent...minimize the need for staff discretion and overt political intervention.
- Make it credible...do solid and practical research that can be used by developers.
- Make it user-friendly...get to the point quickly.

In marketing the approach

- Nothing happens without committed and credible leadership.
- Get everyone involved in a meaningful way.
- Involve people early, preferably at the concept stage.
- (For the federal government) respect the provinces, but find a way to influence events.
- Stress common goals, such as housing affordability and environmental protection.
- Stress continuous learning for politicians, regulators, developers and consultants.

In administering it

- Allow choice...use the performance-based approach as an overlay or parallel scheme rather than a replacement.
- Judgment is unavoidable...balance staff discretion with staff accountability.
- Avoid complexity at all costs...this is the real enemy.
- Stress consistency....same rules for everyone.
- Accept the incremental nature of innovation...keep reviewing, monitoring and adjusting.

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ENDNOTES

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